A

PRACTICAL TREATISE,

&c. &c.

A

PRACTICAL TREATISE

ON

VARIOUS DISEASES

OF THE

ABDOMINAL VISCERA.

BY

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LONDON:

PRINTED BY W. BULMER AND CO. CLEVELAND ROW, ST. JAMES'S;

FOR G. AND W. NICOL, BOOKSELLERS TO HIS MAJESTY, PALL MALL.

1806.

TO

THE MOST NOBLE

JOHN JAMES

MARQUIS OF ABERCORN,

&c. &c. &c.

KNIGHT OF THE MOST NOBLE ORDER
OF THE GARTER.

I CONSIDER it, my Lord, amongst the most fortunate events of my life, that from my first entrance into the medical profession, I have been honoured with the firm support, and uniform protection of your Lordship.

The time, which I have long sought, is at last arrived, and I

rejoice that I am now enabled publicly to profess my most sincere and grateful acknowledgments to your Lordship, for those benefits, which naturally result from the influence of a patronage, at once so efficient from the powers of station, and the energies of character.

If the present volume should be found to contain any observations, by which the sufferings of our nature may be more effectually alleviated or removed, I am well persuaded that the work will acquire a peculiar interest in the mind of your Lordship, which will at once secure to it the most warm and favourable reception.

I have only to hope, that your Lordship will accept, with your

accustomed zeal in the cause of the Author and the object of his art, this sincere though imperfect testimony of that high respect and gratitude, with which I have the honour to be,

Your Lordship's most obliged
and devoted Servant,

CHRISTOPHER ROBERT PEMBERTON.

London,
February 20, 1806.

PREFACE.

ALL must acknowledge the great importance of detecting by early symptoms the insidious advances of internal diseases, which often proceed, without alarm to the Patient, and sometimes even without suspicion to the Practitioner, through various stages of increasing malignity, till they at length terminate in fatal, and irreparable evil.

I have endeavoured, in the following work, to trace these symptoms with some minuteness and precision, and I trust that the younger Professors of our art, will here find materials of practical knowledge, by which they will be enabled to form a just and early prognostic of the nature and tendency of internal disorders.

The Observations, which are here submitted to the attention of the public, are the result of several years experience: they

were made at the bedside of the Patient, and were faithfully recorded at the time, when the cases were passing under my attention.

As I do not mean to introduce any matter, which has not been the result of my own practice, or which has not arisen from my own experience in the practice of others, the reader must not expect to find in this work a regular history of the abdominal diseases as they are recorded by our authors, who have collected the opinions of others on this ample and important theme.

I must observe however, that as I have meditated on this subject for a considerable period, and lost no opportunity of observation during life, or research after death, I am disposed to imagine that this little volume will be found to contain some remarks, not altogether unworthy of attention, even to the experienced Practitioner, upon almost every disorder of the Abdominal Viscera: and he will, I trust, not fail to discover a vein of enquiry into certain diseases, which

others have but slightly recorded, or inadequately conceived.

With respect to the means of cure recommended in this work, or to any diagnostic symptoms, which are here advanced, I must again repeat, that they have been approved by Practice, and confirmed by experience. The Professors of medicine, who best understand the laws of evidence established in our art, will receive, I trust, from this testimony a species of conviction at least equal to that, which is commonly attempted to be supplied by the recital of particular cases, carefully selected and cautiously detailed.

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PRACTICAL TREATISE, &c.

CHAPTER I.

The Peritonæum.

THE Peritonæum is subject to two kinds of inflammation; the one acute, and the other what may be termed chronic.

The acute commences with rigors and shiverings, thirst, fever, and an accelerated pulse, and is attended from the very beginning with a sense of heat and pain in the abdomen, at first generally confined to some one part, though sometimes diffused over the whole of its surface. This pain is much increased by pressure: it produces no inclination to go to stool; the pulse is at least one hundred in a minute, and small, and the tongue has a natural appearance.

In the course of about twenty-four hours, the pain becomes more exquisite on pressure, and the pulse rises to a hundred and twenty, or a hundred and thirty in a minute: at this time the tongue begins to be covered with a cream-coloured mucus, and though it is moist, there is great thirst. A considerable degree of swelling and tension now takes place over the whole abdomen, and the patient finds most relief from pain by remaining motionless upon the back, with the knees in a small degree elevated. This tension continues to increase to the sixth, seventh, or eighth day, on one of which days, unless proper means have been taken to remove the disease, the patient most commonly expires.

This is the Peritonitis of Cullen. It may be distinguished from every other disease of the abdomen,* by the pulse being above one hundred in a minute—by the pain being

* Enteritis *mesenterica* difficillime distinguitur ab enteritide, quâcum etiam sæpè complicatur.—Sauvage, Classis iii. gen. xv. sp. iv.

permanent,—by its being increased from pressure even before any tension has taken place on the abdomen—by its producing no inclination to go to stool, and by its not being diminished, if this evacuation should be produced either spontaneously or by design.

In the examination after death, the Peritonæum is found very minutely injected with red blood; and there is likewise discovered in the cavity of the abdomen, more or less of a fluid, oftentimes whey-coloured, in which shreds of coagulable lymph are seen floating. The intestines are distended with air, frequently to an enormous size.

I am aware that there is an affection of the abdomen, which attacks puerperal women, and which is said to be an infectious disease. I have been present at the examination of several such patients after death, but as I could discover no appearance, which might lead me to conclude that the complaint of the abdomen was any other than a symptomatic Peritonitis attacking a person,

already labouring under great debility, I do not consider it as demanding any separate description. It must be regarded as a symptom only of the puerperal fever, and not as an idiopathic disease of the Peritonæum, which alone falls within the purpose of the present discussion.

The Treatment.

The nature of the disease being once distinctly ascertained, the method of cure is obvious. In the first place it is necessary to bleed largely from the system :—sixteen ounces should be taken from an adult, and a proportionably less quantity from a patient not arrived at that period.

The practitioner ought solely to direct his attention to the degree of pain expressed by the patient, particularly under the action of pressure; and should this not be diminished in eight hours from the former venæsection, I would recommend that the same quantity of blood should be again taken. It generally happens that after this

second bleeding the pain in six hours will become somewhat less acute, when it will be right to apply a dozen leeches to the abdomen, and as soon as they have performed their office, its whole surface should be covered with a blister.

I wish here to be clearly understood, that I do not recommend the use of either leeches or blister, until there appears some diminution of pain from the general bleeding. It commonly happens, as I have stated, that after the second bleeding the pain in six hours becomes less acute; but it may happen, that the pain is not diminished after this second bleeding. In such a case the bleeding must be repeated to the same quantity, to the third, fourth, or fifth times, after intervals of twelve hours each, if the strength of the patient is at all able to support it.* If it should be unequivocally manifest at any one of these bleedings, that

* Interest enim (in venæsectione) non quæ ætas sit, neque quid in corpore intus geratur, sed quæ vires sint. Celsus, lib. 2, cap. 10.

the strength of the patient is inadequate to the loss of sixteen ounces, a less quantity may be taken, and we may resort, at the same time, to the topical application of leeches and blister.

I prefer delaying the use of the blister till the constitutional effects occasioned by the local inflammation are partly removed by the general bleeding, and the disorder is thus reduced to a state more nearly approaching to a simple topical affection. By proceeding thus, the double advantage will be obtained of applying the topical remedies at a period, when their influence will be exerted with the greatest effect, and the practitioner moreover will not be deprived of *the only means* of ascertaining the variations of the disorder,—namely, by pressure on the abdomen.

The first symptom on which we may pronounce the recovery of the patient is the ability of remaining in a sitting posture, after he had previously been confined to the back. This position of the body proves

that the inflamed Peritonæum is now able to bear the weight of the bowels, which I never observed to take place, where the patient has not recovered. On the contrary, the worst symptoms are, when the patient still remains on the back, and the pain on pressure continues equally acute.

I have intentionally forborn to mention the aid of internal medicine, because I was unwilling to withdraw the mind from the great and only remedy in this disease,—the venæsection. It is however necessary that the bowels should be kept constantly open, and that this may be effected with as little irritation on the intestines as possible, six drams or an ounce of castor oil may be directed to be taken in aqua menth. pip: and after its operation the following draught may be recommended:

℞ Ol. Amygdal.
Mucil. Gum. arab. āā ʒij.
Aq. Rosæ ʒx.
Tinct. Opii gtt. ij.

Misce: ft. haustus tertiâ quâque horâ sumendus.

Or, if the oil is offensive to the stomach, the following draught may be substituted:

℞ Magnes: vitriol: ʒj.
Infus. Rosæ ʒv.
Syrup. Mori ʒss.
Misce: fiat haustus tertiâ quâque horâ sumendus.

Fomentations may be also applied to the abdomen, and the strictest antiphlogistic diet should be enforced.

This is a disease full of danger. Women are more subject to it than men; and I have known it take place in a child of four years old, and in adults of all ages.

It may be right to mention an irregularity in the complaint, which if unnoticed, might deter a practitioner from having recourse to those vigorous measures so essential to counteract the magnitude of the danger. There is now and then, at the very first attack, so great a degree of prostration of strength, accompanied likewise by a pulse scarcely perceptible at the wrist, as might induce us to consider the patient at the point of death, and unequal to undergo

the process above described. These appearances, however, arise wholly from the inflammation extending to the peritonæal coat of the stomach and intestines. Here, as before, the pain on pressure must be the criterion to determine our practice, and if the pain should be found exquisite, no accidental symptom should lead us from trusting for relief entirely to the lancet. Such a decision will soon be justified by a freedom in the action of the arterial system, by an abatement of the languor, and by a diminution of the pain.

The Chronic Inflammation of the Peritonæum is a disease, which, though cursorily introduced by writers,* yet has not, as far

* Observatum à doctis hominibus video, gravissimis etiam doloribus urgeri Peritonæum consuëssc, vel certè has membranas, quas abdomini ventrisque partibus obtenduntur. Hi dolores, etsi nullo jure ad coli tormentum pertinent, quoniam tamen æque graves sunt, ac penè similes, neque etiam spatiis locorum multùm dissident, eos hîc quóque ponere rectè posse videor. Sunt autem hi, ut gravissimi, sic admodùm diuturni, &c.—Lommius. Obs. Med. Ed: Edinb. p. 196.

Alii insuper cruciatus, quâdam similitudine et vehemen-

as I know, been hitherto considered in any separate discussion. I the more wonder at this circumstance, since I do not regard it, as a complaint of very uncommon occurrence.

The attack is very different from that of the acute species: it advances by degrees, manifesting itself only by occasional superficial pricking pains over the abdomen, without producing any inclination to go to stool: the pulse is somewhat accelerated, and the tongue (particularly in the morning) is slightly covered with a white fur. There is also considerable thirst; yet I have never observed any exacerbation of fever in the evening, or any hectic flushes on the cheeks: on the contrary, the countenance is full of languor, and the face is pale and doughy.

In the early stages of the disease, the

tiâ colici nuncupantur, quibus tamen non in colo intestino sedes est, sed vel in Peritonæo, vel in membranis quæ abdomini ventrisque partibus obtenduntur. Hi sane gravissimi sunt, et admodum diuturni, &c.

Fernelius Patholog. lib. vi. cap. 10.

patient is capable of performing his ordinary avocations,* and only complains after fatigue of a certain degree of tightness and pricking soreness across the abdomen, from one os ilium to the other. This state will continue, with little variation, for many months, during which time the operations of the bowels will sometimes proceed naturally, though more commonly the patient is costive. There is no tension of the skin of the abdomen, as in the acute species; on the contrary, I have more than once observed the skin and abdominal muscles to sit loosely upon the Peritonæum, which has given a sensation to the touch, as of a tight bandage underneath, over which the skin and muscles may be said (as it were) to play.

The patient always complains more of the *tightness* than of the *pain*, and as this tightness is much increased by any con-

* Inflammatione etiam rapi mesenterium solet. Tum gravitas quidem intus, at nullus manifestus dolor inest; febris oritur levis, nullis molesta casibus gravioribus, ita ut sub eâ vitæ etiam obire munia homini liceat.

Lommius Obs. Med. p. 307.

gestion in the intestines, the relief which he experiences from evacuating their contents, leads him to attribute his sensations to an habitual costiveness, for the removal of which supposed evil all his endeavours are usually directed.

In the mean time the disease gains ground, till either from some accidental circumstance it assumes the acute form above described, or till coagulable lymph is slowly thrown out from the inflamed surface, which, becoming in part organized, will glue together the convolutions of the intestines. In the former case the danger will be extreme from the patient having been reduced to a state of great debility by the duration of the preceding disease; and in the latter case an equal danger will be incurred by the interruption of the peristaltic motion. Sometimes a resolution of the inflammation takes place from the throwing out of a fluid, when Ascites is produced, which will render the situation of the patient still more hopeless.

It frequently happens that the Mesenteric glands are enlarged, but I never saw suppuration in them, or cheesy matter; so that I consider it as a very different disease from a scrophulous affection of these glands, as it seems to be an enlargement of them, merely from irritation of the inflamed membrane, with which they are surrounded.

That the disease of the glands follows the course I have here described, and that the inflammation does not extend *from* the Mesenteric glands to the Peritonæum, I am inclined to believe; first, from the very different set of symptoms, which mark an idiopathic disease of these glands, (which will be described hereafter,) and secondly, from the opportunity, which occurred to me of examining a patient, who, having suffered all the symptoms of chronic inflammation of the Peritonæum for two years, destroyed himself in a fit of insanity. Here the Peritonæum was perfectly opaque, devoid of elasticity, and almost as thick as

a crown piece:* there was also found ulceration of two of the bodies of the lumbar vertebræ, from which perhaps the inflammation might have crept to the Peritonæum, but the mesenteric glands were perfectly free from complaint. Again, I have seen all the convolutions of the intestines blended into one mass by this disease, so that it was impossible to separate them by dissection from each other, or from the peritonæal coat of the parietes of the abdomen, and still there appeared no disease in the mesenteric glands.

The treatment of this disease consists, in forbidding animal food, or broths, and all fermented liquors—in enforcing the absolute necessity of rigidly adhering to a milk and vegetable diet;—and, above all, in taking away blood once or twice in the week to the quantity of six ounces each time. This plan is to be pursued till all

* See a case related by De Haen, where the Peritonæum was found much thickened. Pars. VI. problema nonum.

sensations of pricking pain, and all whiteness of the tongue have disappeared. If the constitution should shew signs of considerable derangement, I would prefer the blood being taken from the arm:* if on the contrary the local disease has made but little disturbance in the system, then I would recommend the blood to be taken by the application of six or eight leeches to the abdomen, or by cupping. The bowels are to be opened once or twice a day, either by the oily draught, as before ordered, or by the draught, containing the magnesia vitriolata, bis vel ter quotidiè.

This disease is also full of danger,† as well from the slow insidious progress, which it makes to undermine *of itself* the

* Mitti vero sanguis debet, si totius corporis causa sit, ex brachio: si partis alicujus, ex eâ ipsâ parte. Celsus, lib. ii. cap. 10.

† Sennertus (lib. iii. Pars. iii. cap. 4), after he has given the prognostic of acute inflammation of the mesentery, makes the following observation, which seems to apply to what I have termed chronic inflammation of that membrane, viz.

"Sæpè vero materia à naturâ alio transvertitur, non tamen planè tollitur; unde malum recrudescit, et sæpè per

constitution, as from the accidents to which it exposes the patient during the long course of management required in its treatment; I might also add, as another cause of danger, the want of resolution, which we have so often to regret in our patients, during the cure of a chronic disease, where the advantages of the plan, from its gradual operation, are not so obvious to the senses.*

All ages are subject to this disease, but to my observation women are more liable to it than men.

The symptoms, which indicate recovery, are an abatement of the pricking pains of the abdomen, and also a diminution of the frequency of the pulse to eighty in a minute: but I must observe, that even under these appearances, however favourable, a relapse is always to be dreaded.

multos annos, imò totum vitæ tempus durat, nunc febre redeunte, nunc eâdem in colicos dolores permutatâ, ac cessante febre singulis mensibus, vel alio intervallo colicâ redeunte, et si *non inflammatione*, tamen φλογωσει excitatâ."

* See Sydenham, Tract. de Podagrâ. Ed. Lugd. Batav. 1726. p. 458.

It may be expected that I should here mention the diseases of the Omentum; but since I do not consider it as having any morbid affection exclusively from those belonging to the Peritonæum, of which it is an elongation, the diseases of it are comprehended in what has been already described. I may however add, that the Omentum is sometimes beset with Hydatids, without any such appearance being discovered in that part of the Peritonæum which lines the cavity of the abdomen. An Hydatid of this sort, of a very large size, has lately fallen under my observation. It was in shape an oblong cylinder, whose long diameter was about five inches, and whose short diameter was about two inches. It contained a limpid transparent fluid, in which several smaller hydatids floated: these were transparent and spherical.

The external coat of the large Hydatid was opaque, and of a cartilaginous hardness: the internal coat was pulpy, soft, and of a yellowish colour.

This Hydatid was discoverable before death, as a hard oblong tumour just above the navel.

It is necessary to observe, that the immense deposition of fat which is sometimes discovered between the lamina of the Omentum, cannot be considered as disease.

CHAPTER II.

The Liver.

THE Liver, amongst other diseases, is subject to two kinds of inflammation,—the acute and chronic.

The acute commences with rigors, shiverings, and an accelerated pulse: often with a pungent pain in the right side, which is felt also under the margin of the ribs, shooting to the back and shoulder blade. The pain is permanent, unattended by nausea: the respiration is usually quickened, and there is thirst, with a white dry tongue. Jaundice may or may not take place, as the membrane covering the concave surface of the Liver and gall-ducts, is or is not inflamed: and therefore jaundice cannot be considered a necessary consequence of this complaint.

The tendency in the Liver to run into suppuration is certainly not so great in this country as in warmer climates; for here, I think, abscess of the Liver must be reckoned an uncommon occurrence. It would appear as if the membrane of the Liver, in this country, was more prone to acute inflammation, and the substance of the liver to chronic.

I have omitted Cough from amongst the *first* symptoms of this disease, because I never knew it take place till after the pain had seized the patient at least forty-eight hours. It is right, however, to state, that after this period, it is a very common, and almost constant symptom.

The Cough is sometimes loose, and sometimes dry: when it arises from the general inflammatory diathesis, producing an increased secretion from the mucous membrane of the lungs, it is loose:—but when it arises from the inflamed membrane of the convex surface of the Liver irritating the diaphragm, it is dry. When it is loose,

and the expectoration abundant, it may be of considerable advantage to the patient, by diminishing the general inflammatory diathesis, so as materially to assist in bringing about a resolution of the disease.* When the Cough is dry, no advantage whatever is derived from it.

It is extremely difficult to distinguish this disease from inflammation within the chest; though I think by attending to the following circumstances, the difficulty will in a great measure be removed: *first*—by remarking, that a gradual inspiration does not produce Cough, although it increases the pain: *secondly*, that the pain is increased by gentle pressure under the margin of the ribs, which would not be the case, if the inflammation was within the chest: and *thirdly*, that the Cough (if it be present) is found to have *succeeded* the pain several days, and not to have *preceded*, or to have been *coeval* with it, as in Pleurisy.

* To this state of cough Dr. Cullen perhaps alludes in his "First Lines, &c." Section 420.

Inflammation of the Liver may be distinguished from spasm on the gall-ducts, by there being no nausea,—by the pain being permanent,—by the pulse being upwards of one hundred in a minute, and by the patient always preferring to keep the body in a straight, quiescent posture; whereas the greatest ease, when there is spasm on the gall-ducts, is obtained by bending the body forward on the knees.

The Treatment.

The cure of this disease should be attempted by strictly adhering to the antiphlogistic diet—by bleeding largely from the system—by cupping—by the use of saline purges—and by the application of Blisters.

From an adult sixteen ounces of blood should be taken from the arm, and an ordinary purgative draught directed, perhaps the following

℞ Infus: Sennæ ℥iss.
Magnes: vitriol: ʒiij.
Tinct. Sennæ.
Syrup. Mori āā ʒj. M. ft. Haustus.

It often happens that the blood first drawn is not at all buffy:* still, however, (the disease answering strictly to the description here given,) should the pain be equally acute, and should the pulse continue hard and frequent for eight hours after the former venæsection, we should again order a like quantity to be taken away; and this blood will usually shew beginning buff.

By this time the purgative draught will have produced its effect, when it would be advisable that a stimulus be kept upon the intestines by about one drachm of Magnes. vitriolat: in either Aq. Menth. sativ. ℥iss. or in the same quantity of infus: rosæ every

* It would seem as if Sydenham had observed the same thing in Pleuritis, for he says—"Sanguis (saltem ille, qui *post primam vicem* extrahitur) ubi refrixerit, sevi liquati præ se fert speciem ad crassitiem satis conspicuam," &c. Hence we may infer that he had noticed that the blood *first drawn* (even in Pleurisy) was not always buffy.

three hours. By this constant stimulus on the intestines we shall make a demand (if I may so express it) upon the arterial blood of the intestines, and thus prevent so large a quantity from passing on to the Vena portarum to distend the inflamed viscus.

Purging therefore in this disease from theory seems of essential use, and it is proved to be so by repeated experience. Our reliance on continued purging may be such, that after the second bleeding we may wait about eighteen hours before we have recourse to a third bleeding: at this time, unless the pain be diminished, and the pulse become more natural, blood may again be taken from the arm, and a large blister applied to the whole of the right side.

The blood at this time shews a thick coat of buff; on which it is expedient to offer a few remarks.

I am, with others, well aware that the presence or absence of Buff ought not *of*

itself to decide our practice as to future bleeding, inasmuch as the most trifling circumstance in the *manner* of the blood's flowing will prevent its appearance altogether, even during active inflammation: yet when it is present, I think that an attentive observation of its texture will materially assist us in deciding how far we may again venture upon general bleeding.

If, for example, the Buff after six hours from the time of the venæsection appears very firm, compact, and opaque, has a concave surface, and is puckered at the edges, and if the hardness of the pulse, and the degree of pain be not diminished, we may feel secure that the patient will again bear with advantage a bleeding from the system. If, on the contrary, the buff (after an equal time) appears with a flat surface, is semitransparent, and has a greenish-yellow colour, with a striated filamentous texture running through it, we must not again have recourse to general bleeding, but place all our reliance on topical bleeding, blistering, and purging.

It may be observed, that this last appearance in the buff does not arise from bile; because when inflammation of the Liver has occasioned jaundice, the buff is not tinged in this way by the bile through its whole substance: this greenish buff seems therefore to arise from a particular action of the arteries, perhaps from one somewhat weaker than that, which occasions a slow* coagulation of the blood; during which it is that the firm, opaque buff becomes apparent.

Such then are the exertions, which must be pursued until you obtain a diminution of pain, and an abatement of the febrile symptoms.

Physicians have been struck, at all times, with the effect produced by taking the blood from a large orifice† in inflammatory

* See Fordyce, Dissertation 4th, p. 22.

† Aretæus. Περι Θεραπ: Οξεων Παθων, Βιβλ: Α, Κεφ. ζ'.
Ditto, Ditto, Βιβλ: Α, Κεφ. η'.
Ditto, Ditto, Βιβλ: Β, Κεφ. α'.
Ditto, Ditto, Βιβλ: Β, Κεφ. ε'.
Fordyce, Dissertation on Fever, 4th, p. 50.
Ditto, Ditto, 5th, p. 15.

diseases, and it is certainly a matter which cannot be too strongly urged as an indispensable point in practice: especially as the generality of writers do not seem to have instituted any defined plan to regulate and secure the effectual performance of this important operation. I wish, therefore, to press in the strongest terms the absolute necessity of attending to that circumstance, which the following observations may perhaps tend to elucidate.

It is true that from a *small* orifice an equal quanity of blood may be taken as from a *large* one, but the *time* of its flowing is so long, that the topical inflammation, which demands for its relief a sudden effect upon the system, is not in the least influenced by it, though the general strength is much weakened, which is an occurrence of all others to be avoided in a disease, that requires repeated evacuations.

As I consider this matter of great consequence, I shall endeavour to point out a method, by which a plan of a more defined

nature than that hitherto adopted may be given for drawing blood in inflammatory diseases.

At present we are contented to order, that the blood should be taken from a large or from a small orifice, than which nothing surely can be more vague or undefined. The plan, which I propose, refers to the *length of time* in taking the blood, which may be measured, and not to the size of the orifice, which can not.

I find from numerous experiments, made at my desire for this purpose by different surgeons, that when the orifice is such as to permit eight ounces of blood to flow in three minutes, that then, a patient under acute inflammation will receive every benefit which is expected from the remedy. If it flows in a longer time he will receive less benefit, and under certain circumstances no benefit at all, or even an absolute injury.

I can suppose a case of Peripneumony, where a patient shall have just general

strength enough to carry on respiration by the assistance of the voluntary muscles, and that eight ounces of blood shall be taken from a very small orifice, by which the change will be so gradual, in consequence of the time required for the blood to flow, that no alteration whatever will be made in the disease, but yet the general strength shall be so diminished, that death will ensue: on the other hand, had the same quantity of blood been taken by a large orifice, that *then* the disease would have felt the remedy, and respiration would have gone on with less exertion of the remaining general strength, in consequence of the Lungs being relieved by this sudden depletion.

The great consequence therefore attached to the mode in which Blood is drawn, (as on this alone life or death may often depend,) imperiously demands of every Physician to impress upon the mind of his patient the importance of the operation, and the absolute necessity of having it

performed by a person fully skilled in his profession.

I should not omit to mention that there may now and then occur a case, where the vein may not only be particularly small, but likewise be deep-seated, and covered with fat. Here, although the orifice may be sufficiently large, yet a portion of fat will obtrude so as to interrupt the stream of blood. I would in such case recommend the surgeon to dilate the external orifice, or even make a fresh orifice, rather than persist in his endeavours to obtain the quantity required in this gradual way.*

Calomel is often recommended in the

* At vero animadvertendum est, quod si sanguis è sectâ venâ non recto flumine versus horizontem prosiliat sed per cutem repens perpendiculariter dimanet, utut celeri se prosipiat gradu, sæpe tamen ad dictum colorem (subalbidum nempè) non accedit, cujus ego me caussam nescire fateor: neque Æger ab istiusmodi sanguinis missione perinde levatur, ac si modo primum descripto fluat. Sydenhamus Sect: sexta, cap. III.

Incidatur vena sic ut ne sanguis effluens cutem lambat, verum rectè liberèque prosiliat. Simson de re med. p. 112.

early stages of inflamed Liver. In a large dose, as a purgative, I cannot object to it; but as a medicine to keep up a continued discharge from the bowels, I regard it as much inferior to the neutral salt recommended above; and as a mercurial alterative at this period of the complaint, its use is wholly inadmissible.

I may also in the same manner object to the early use of mercurial ointment, whose effect would doubtless be to increase the action of the arterial system, which is already too much quickened. As soon however as you perceive an abatement in the pain and febrile symptoms, then is the period when the use of Mercury may be allowed: though I cannot, even here, help expressing some doubts whether, after a true and simple Inflammation of the *membrane* of the Liver, any advantage is derived from it. However, as it is impossible to know whether the inflammation has been solely confined to the membrane, or whether it may not have dipped down a little

into the substance of the Liver, and thus by causing a thickening of its parts, might in future obstruct its operation, it is always advisable to direct about half a drachm of Unguent: Hydrarg: fort: to be rubbed upon the side every night, taking care to watch very minutely whether the pain or fever be at all reproduced by it. In this case it should be instantly laid aside, as no advantage can be expected from it under such circumstances. But if on the contrary, any slight pain, which remained, appears to to be diminished, and if no fever is produced, we may then continue its use for eight or ten nights; or, in case jaundice should have attended the disease, even till the patient perceives it effects upon the mouth: it should then be gradually laid aside; i. e. by using it every other night, or only twice in the week.

From the time that the patient enters upon the course of mercury, it is proper to change the internal medicine, and order three times a day about two ounces of a

slight infusion of some bitter, such as Quassia or Gentian; to each of which draughts as much of a neutral salt may be added as will procure daily, one evacuation.

By degrees too the diet may be improved by the addition of animal broths, &c. till the patient is perfectly restored to health.

This is the course of the disease, (and the plan to be pursued) when it makes its appearance in a strong and otherwise healthy subject: but it not uncommonly attacks those, who have been debilitated by irregularities in their manner of life, or, by the chronic form of the disease, and who are therefore ill calculated to bear the measures, which are necessary for the cure of the complaint.

If the disease has come on suddenly without any previous illness, and the patient is otherwise of a healthy and strong constitution, and the buff on the blood is compact, opaque, and firm, a favourable prognostic may be given.

If, on the contrary, the disease appears to have crept on by degrees,—if the patient is emaciated, and the buff semitransparent, jelly-like, and striated, and has the greenish colour above described, the prognostic is unfavourable.

In the former case he will bear the remedies necessary: In the latter he will probably not, and here it will only be in our power to adopt the measures recommended above, in proportion to the strength of the patient, and the more *that* is weakened by the remedies, the less will be his chance of recovery.

The most favourable symptoms are an abatement of the pain and fever, the pulse becoming less frequent, and the general strength of the patient appearing not to be materially lowered by the remedies.

The most unfavourable symptoms are the general strength of the patient becoming much exhausted and lowered by the remedies, at the same time that the pain and fever remain equally violent: or, an

abatement of the pain with the pulse *increasing* in frequency, attended with repeated chilly fits. Sweats about the face, with a more frequent pulse, must also be reckoned an alarming symptom. These latter are indications, which bespeak suppuration at hand, a termination of the disease if possible to be avoided; for the chance of recovery, when this has actually taken place, is very little indeed.

The case, however, is still not altogether hopeless; for it sometimes happens, that an abscess points externally, which is known by a bulging of the ribs on the right side, or by a tumour appearing below their margin. Sometimes it encroaches upon the cavity of the chest, and adhesions being formed (in consequence of inflammation) between the boundary of the abscess and the diaphragm, and between that again and the lungs, the matter either bursts suddenly into the lungs, by which the patient is instantly destroyed; or it filters

through innumerable small orifices* into the air-cells, and is spit up gradually for many weeks. This fortunate occurrence may still give the patient some small chance of recovery, but it more commonly happens, that after having been worn down by continual coughing and hectic fever, he at last sinks under the disease.

The abscess sometimes makes its way through the gall ducts, and also by adhesions into the stomach and duodenum: yet

* I have seen an abscess in the Liver where the matter has been spit up for several weeks, in the manner here mentioned. On examination after death, this abscess appeared to contain at least two quarts of matter, which, by a very gentle pressure on the Liver, could be made to ooze through the diaphragm by innumerable orifices into the lungs, which adhered to it.

In the matter of the abscess were seen at least five hundred Hydatids from two inches and a half diameter, to the size of a pin's head. They were about one third filled with a transparent yellow fluid, which was very unlike the matter in which they floated. This patient therefore could not possibly have recovered by means of expectoration; for although some of the smaller Hydatids might have been spit up, the orifice to permit one of the larger to pass must have been so great that instant suffocation would have followed.†

† See Morgagni Epist. xxxvi. Art. 4 and 5.

we may observe that it scarcely ever bursts into the cavity of the abdomen.

As we have not by any management the smallest control in directing the most advantageous route for the matter to pass off, it is sufficient to have mentioned the various modes, by which it seeks an exit for itself.

As soon as we have ascertained by the symptoms above mentioned that matter is formed, our whole endeavours should be to support the strength of the patient by bark, cordials, and a nourishing, though mild, diet. We should examine minutely into the state of the side, both between the ribs, and under them, and the moment that any tumour is discovered, which gives the sensation of fluctuation, it should be opened by a small orifice.

The case then falls more immediately under the province of surgery, and therefore is not here to be further discussed.

The Chronic form of the disease is discovered by a sense of weight and numb pain in the right side, and a weight and weariness in the right arm. There is also frequently a pain on the top of the shoulder. The Tongue is usually whitish, the appetite impaired, and the countenance sallow. The pulse is about ninety, and almost invariably intermitting.

We may account, I think, for this intermission, from the blood in the hepatic artery not finding a ready passage through the hardened viscus: * it is therefore thrown back upon the heart, and thus interrupts the regular action of that organ. There is also very commonly a sensation of fluttering at the pit of the stomach; which, I imagine, arises from the blood of the Vena portarum being in like manner unable to find a free passage. It is therefore retained in that

* See Morgagni de Sedibus, &c. Epist. xxxvi. Art. 34.

vein, and thus causes a sensation of undulation.

From the want of a free passage for the venous blood arise the hæmorrhages, which often take place from the stomach, intestines, and nose: on the nose also, and on the forehead pimples are observed frequently to break out. These appearances, therefore, when they occur repeatedly, should warn us to make minute inquiry respecting the state of the Liver. The body in this disease becomes much emaciated, and in the advanced stages a dropsy of the belly takes place, by which the patient is destroyed.

There is but little risque of this form of the malady being mistaken for a disease of any other part, though there are various modifications of chronically diseased Liver itself, which, as far as I have observed, afford no peculiarity of symptoms, by which they can be distinguished from each other. This is matter of regret, because the states in which the Liver is found after death, are often diametrically opposite. For example,

it is sometimes seen to be larger and harder than natural, sometimes smaller and harder, and sometimes larger and much softer. Now it is impossible that the same mode of treatment should be adopted for these opposite states with any rational prospect of advantage.*

The Treatment.

The treatment to be recommended, must be considered as applying to that stage of the

* I have examined two patients, where the Liver was found much larger than natural, and so soft that the fingers passed through it with the greatest ease. The structure appeared also destroyed, so that it resembled a bag containing coagulated blood. It cannot be supposed, that the remedies which are employed to cure a schirrous Liver, where it is already too hard, could with propriety be recommended in these cases, where it was already too soft.

I have to regret that I could discover no symptom during life, which would mark this peculiarity, unless it be that they were remarkably *florid* for persons with diseased Liver. Though I lay no stress on this appearance, yet I must observe, that I have also examined a patient after death, where the Liver was much larger than natural, and perfectly cream-coloured both on its surface and through its substance; and here the face and the whole of the skin of the patient, during her illness, were of the same *pale* colour. Will the colour of the skin afford us any assistance in conjecturing about the nature of chronically diseased Liver? See also Morgagni de Sed. et Causis Morb. Epist. xxxvi. Art. 27.

disease, before the structure of the Liver is totally destroyed; and here again I must revert to the infinite advantage to be derived from continued purging, and to this cause must be attributed the benefit arising from Cheltenham water, which cannot be too highly recommended in this disease. The degree of purging must be in proportion to the strength of the patient.

The method to be pursued is as follows:—Let the patient take every morning, or every other morning, about three drachms of Magnes: vitriolat: in any vehicle; or, half a pint of the Seidlitz water, as prepared by N. Paul and Co. containing a like quantity of the salt, and in the day let him take the draught, as follows:

℞ Aq. Menth: sativ: ℥iss.
Extract: Taraxac: ʒss.
Misce, fiat haustus meridiè sumendus et horâ somni.

Let him also every night rub about a scruple of Unguent: Hydrarg: fort: on the side; and this should be continued till

the mouth is slightly affected. I have specified the side on this occasion, for, though we all know, that the mercury would find its way as readily into the system if rubbed upon any other part of the body, yet it is advisable to have it rubbed upon the side, because I believe considerable advantage is derived from the mere friction.

The mouth should be kept if possible in this state of gentle salivation, till all symptoms of the disease have disappeared, and the practitioner must therefore modify the quantity of mercury to be used by the effect produced.

I particularly recommend the use of the Taraxacum,* from which I have seen the most decided advantage, both in incipient Schirrus of the Liver, and also in several chronic derangements of the Stomach.

The proportions of the medicines here directed is the average quantity of the doses usually given to adults. The plan of treat-

* Taraxacum has been recommended by Boerhaave for the removal of biliary calculi.

ment is all that can be pointed out; but the adapting it to particular cases must be left to the discretion of the Physician.

The diet should be moderately nourishing, though not stimulating, and all fermented liquors should be laid aside. Milk does not often agree with persons under this complaint: when it can be taken without producing head-ache or fever, it is the best possible diet: vegetables and fruits of all sorts are highly advantageous.

The Prognostic is always unfavourable, for in the first place, it is impossible to tell the exact state of the Liver; and secondly, if we actually knew it, the most judicious application of the most powerful remedies would be unequal sometimes to remove the disease.

The most favourable symptoms are, an improvement in the complexion, — the strength not weakened by the remedies, and a return of appetite, and I think if you observe your patient *decidedly* gaining bulk in the solids of the body, you may safely pronounce that he will recover.

The most unfavourable symptoms are the colour of the skin remaining the same, or becoming more sallow,—the general strength much diminished,—the abdomen beginning to swell,—and the patient losing bulk in the upper extremities, while the lower become more enlarged.

Hydatids in the Liver are not very uncommon; they often produce abscess, as in the case just related. I know of no symptoms by which an abscess occasioned by them can be distinguished from one, which arises from common inflammation. They are also often suspended from its surface, but I know of no symptoms by which their existence there can be ascertained.

CHAPTER III.

The Gall-Bladder.

THE diseases of the Gall-bladder may be divided into those, of which it partakes in consequence of disease of the neighbouring viscera, and into those which it has properly belonging to itself.

Amongst the first may be reckoned inflammation extending from the Liver to the Gall-bladder and ducts, which, by thickening the coats of the canal, will so straiten its diameter, as ultimately to obstruct the course of the bile into the duodenum. This often lays the foundation of an incurable Jaundice: for though, by the means recommended, we may remove the inflammation of the duct, yet the thickening remains, a permanent evil: this state of the duct I have more than once seen.

Inflammations of the pylorus will also

extend itself to the ducts, and produce the same consequences. Schirrous tumours of the liver, or of the pylorus, by mere pressure also sometimes obstruct the passage of the bile, without occasioning any alteration in the structure of the ducts: tumours also of the Pancreas have been known to produce the same effect.

The Jaundice arising from either of these causes, may be distinguished from that, which arises from spasms, or gall-stones, by the symptoms of Inflammation having preceded, by the pain varying very little in degree, and by its not having come on suddenly. The pulse also in this case is always above one hundred in a minute, and before the appearance of Jaundice, a great wasting of the flesh has been visible.

The prognostic in this case of Jaundice is unfavourable.* Its cure should be attempted

* Stupor with delirium is reckoned a fatal symptom in Jaundice from the time of Hippocrates. I can say nothing of this from my own experience, though it should seem as if it was not of very uncommon occurrence. See Morgagni de Sed: et Causis Morb: Epist: xxxvii. Art. 6.

by a mercurial course, and a mild diet. The patient should take twice a day a bitter draught with as much Infus: Sennæ, or Magnes: vitriolat: in each as will produce two evacuations daily: but should the disease be attended with a Diarrhœa, which frequently happens, a few drops of Tinct: Opii should be added to the bitter draught, and the Infus: Sennæ or neutral salts should be omitted.

The Jaundice from spasm, or from Gall-stones, may be known by a sudden acute pain at the pit of the stomach, attended with nausea, and retchings. Sometimes there are shiverings and sometimes not. When these shiverings occur, it may be observed that they come on *after* the pain has continued some time, and do not precede the pain, as is the case with those shiverings which attend inflammation. There are often profuse sweats, though sometimes this symptom is also wanting. These sweats do not seem to depend at all upon the shivering, for I have often

observed them where no shivering has attended the disease. The pulse is seldom more than one hundred in a minute—often not more frequent than when the patient is in health, and sometimes even slower than natural.

The pain, as I have said, is most acute exactly at the pit of the stomach, but from this spot, as from a centre, there is a diffused pain over the whole of the epigastric region; and this pain often extends to the right side, and to the back: there is great and continual restlessness, with irregular and spasmodic twitches, in various parts of the body.*

Though the patient, during the passage of a Gall-stone, is never free from some pain, yet it increases, by paroxysms, to a state of acute suffering, and subsides again into one of comparative ease; and these paroxysms occur several times in an hour.

* Morgagni has observed, that those who are subject to urinary calculi are also subject to Gall-stones. See Epist: xxxvii. Art. 43.

The greatest relief from pain is experienced by bending the body forward upon the knees. The urine is of a dark-brown colour, from an admixture of bile: The stools are, from a deficiency of it, clay-coloured. The state of the bowels is very irregular:* they appear to me to be as often relaxed as constipated.

The pain (even before a Jaundice appears) may be distinguished from that which attends Inflammation, by its being relieved on pressure of the part, by the sweat, and by the pulse not being above one hundred in a minute.

It may be observed, that the more exquisite the pain is, *provided the pulse is below one hundred in a minute*, with the more confidence may we rely upon this diagnostic symptom; inasmuch as such pain could only arise from the inflammation of a *membrane*, in which case the pulse would far exceed the number above specified.

* Heberden Commentarii, p. 210. Morgagni de Causis et Sed. Morb. Epist. xxxvii. Art. 36.

The cure of this disease should be attempted by warm fomentations to the belly,—by the warm bath,—by opium, and by purges or glysters. The quantity of opium ought to have no limit but the absolute abatement of the pain, and till that object is obtained, the patient should take a grain of solid Opium, or twenty-five drops of Tinct: Opii every hour.

The following is a form of pill, which will often be found to remain on the stomach when all other medicines have been rejected:

℞ Extract. Gentian:
Natri exsiccat āā gr. ij.
Opii purificat: gr. j.
Contunde simul et fiat pilula, tertiâ quâque horâ sumenda.

A starch glister will frequently produce immediate relief, in the following form:

℞ Mucil: Amyli ℥iv.
Tinct: Opii gtt. L.
M. ft. Enema sextâ vel octavâ quâque horâ injiciendum.

The use of Emetics is precarious: some-

times they appear to do good, sometimes nothing, and sometimes harm. On the whole, therefore, I am not much inclined to recommend their use.

As soon as the pain is somewhat relieved by opium, the warm bath, fomentations, &c. it is proper to direct a pill of five grains of Calomel, and about four hours afterwards a solution of neutral Salts in Peppermint water; and these should be repeated every third day till the disease disappears.

When there is complete evidence, (from the colour of the stools,) that the obstruction is removed from the Gall-duct, about two ounces of some slight bitter, such as the Infus: Gentian. comp. or the Infus: Cascarillæ, should be ordered three times a day.

Æther, in consequence of its power of dissolving the Gall-stone, has been strongly recommended to be employed both through the medium of the stomach, and also in glyster; but I do not think that it is to be preferred to opium.

Such is the treatment to be adopted, whether the Jaundice arises from spasm merely, or from Gall-stone stopping the duct. In the former case, the disease will soon disappear. In the latter case, it not uncommonly happens, that the stone, either from its magnitude or from its angles, will produce inflammation upon the duct. It then becomes a more serious complaint, requiring venæsection and purgatives, as recommended in the Inflammation of the Peritonæum. This unfortunate change may be detected by an increase in the frequency of the pulse, which will soon become at least one hundred and twenty, or an hundred and thirty in a minute, when you must no longer defer the active measures above-mentioned.

For the composition of the different biliary concretions, I beg to refer my readers to a very accurate analysis of them, published by Dr. R. Powell, being the substance of the Gulstonian Lecture, read at the College of Physicians in 1800,—and

also to a Treatise on the Liver, by Dr. Saunders.

The manner in which a Gall-stone passes along the duct, or the power which propels it forwards, is, to my conception, not clearly and satisfactorily explained. It has been commonly imagined, that the stone is protruded forward by the contractibility of the duct alone; but this, as it appears to me, (even if we allow that the ducts are irritable when acted upon by stimuli,) would be as likely to propel it one way, as another: and all those medicines which are given for the purpose of irritating the duct into stronger contractions, would be as likely to do harm as good.* The following figures may perhaps throw some light upon the subject.

* Quo enim calculus magis ductus irritat, eo magis ad calculum se contrahunt ductus, itaque et suos augent cruciatus, et illi transitum intercludunt. **Morgagni**, de Sed. et Causis Morborum, Epist: xxxvii. Art. 49.

Fig. 1. Represents a Gall-bladder and ducts, in their natural state.

Fig. 2.—A, The Gall-bladder.

B, Ductus cysticus.

C, Ductus hepaticus.

D, A biliary calculus plugging up the ductus communis choledochus.

In this representation is seen a biliary calculus plugging up the ductus communis choledochus, in consequence of which, that duct, (as well as the ductus hepaticus, and ductus cysticus,) is much distended by the bile, which is collected behind it. As this distention is increased by the secreted bile, the stone is propelled forward till it is deposited in the duodenum, after which the ducts again recover their natural diameter. That they do not recover their natural diameter before the stone has actually passed into the duodenum, may be seen by referring to Fig. 4, Plate 6, of the fifth Fasciculus of Dr. Baillie's Morbid Anatomy.*

* See also Haller, Prima Linea, Sect. 711.

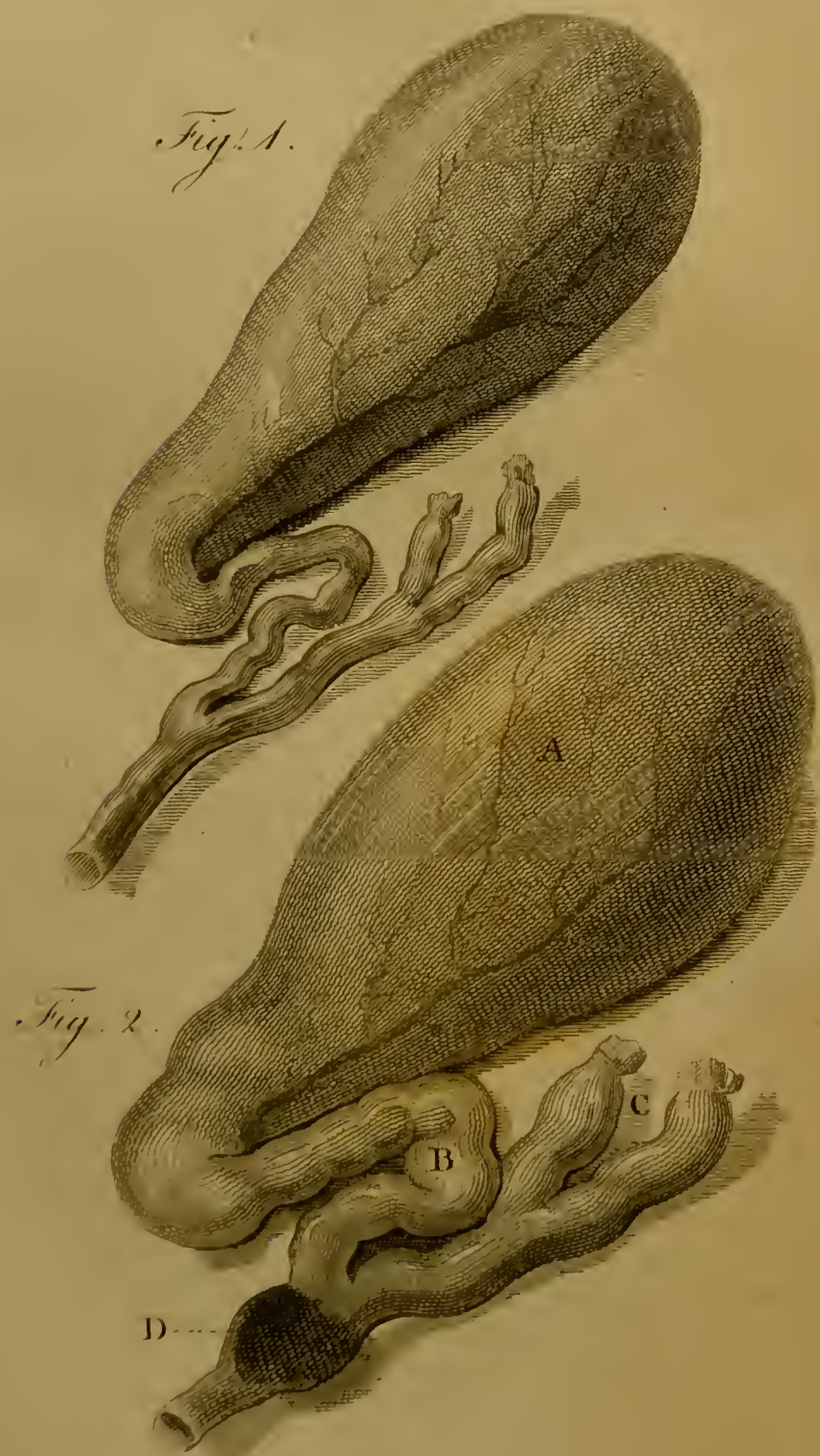
Fig. 1.
Fig. 2.
A
B
C
D

If the calculus had been propelled by any contractile power of the duct exerted upon the stone itself, we ought to find the duct contracted behind the stone, but this is contrary to the fact, as it is represented in the plate above mentioned. Indeed it is maintained by some physiologists that after the passage of a Gall-stone, the ducts never again recover their natural diameter.*

Opium is universally believed to facilitate the passage of Gall-stones by relaxing the constriction on the ducts, but the relaxing powers of opium would at the same time overcome the action of the muscular fibres, and instead of accelerating would retard the propulsion of the Gall-stone, if its progress were accomplished by muscular action.

Again, when venæsection is employed in these cases, as a relaxant and antispasmodic, its debilitating powers must at the same time weaken the muscular energy of the duct, and rather retard than expedite the

* See Dr. Saunders on the Liver, p. 169.

extrusion of the calculus if it owed its progress to such an impulse as muscular action.

If, moreover, we consider the passage of the stone effected by the contraction of the duct upon the stone, we might wonder, that there should not *always* be inflammation produced, rather than that it should only sometimes happen: but if we consider the expulsion of the stone brought about by the distension of the duct from *fluid bile*, the reason of inflammation so rarely occurring will be satisfactorily explained.

The mode by which a Gall-stone passes, seems analogous in its effect, though not exactly in the peculiar process, to the mode by which a fœtus is enabled to pass from the uterus; for in this case the passage is prepared, and the propulsion is expedited by the contraction of the uterus upon the liquor Amnii: by this the os uteri is so dilated, as to allow a more enlarged passage for the fœtus. The cases differ in certain circumstances, but agree, as I imagine, in

this respect, that the passage for the exit of the solid body is prepared by the fluid surrounding the solid, and not by the solid itself.

This idea of the passage of the Gall-stone may perhaps serve in some measure to explain the uncertainty in the power of emetics in forwarding a Gall-stone. We all know, that the effect of an emetic is not only to produce relaxation of the whole body, but also to increase the secretion of bile: This increased secretion of the bile, if its exit is prevented, will mechanically increase the distension of the duct, and thus will a passage be opened for the calculus. If this position be true, it will follow that an emetic cannot assist the expulsion unless there be a total stoppage of the duct; for without this, the bile would pass off and no distension take place. The frequent failure of emetics, in making any impression on the disease, sufficiently argues a modification of the complaint, over which they have no power. This modification I take to be that state,

when the stone, in consequence of its angles, does not completely close the duct.

In Jaundice, from spasm or from Gall-stone, the Prognostic is favourable, for in the first case the spasm will assuredly cease; and in the second case, if the stone be small enough to enter the duct, it is most likely that it will pass its whole length, inasmuch as the canal at the entrance is of less diameter than when it unites with the hepatic duct to form the ductus communis choledochus.

I must not however omit to mention, that now and then there happens a fatal termination of the disease, from rupture of the duct: yet this occurs so seldom, that it ought not to affect the above general position. When the obstruction is removed there often arises a bilious diarrhœa.* This appearance therefore must be regarded as conclusive, with respect to the recovery of the patient.

On the Jaundice first shewing itself upon

* See Fernelius, Advers: 3, Animad: 8.

the skin, there is usually a violent degree of itching. This will often subside after a few days, and I have so often known it return again, a day, or even two days before we had other evident proof of the obstruction being removed, that I must consider its recurrence as a favourable symptom.

A variation in the yellow colour of the eye and skin often takes place even during the time the obstruction remains the same, and therefore we cannot at any time rely upon a somewhat less degree of yellowness as a symptom of recovery.

Amongst the unfavourable symptoms may be reckoned a continuation of the intenseness of the yellow colour in the eye; —the pain at the stomach remaining equally acute, and confined to the same spot—an increase of nausea—a very great wasting of the flesh, and the stools and urine retaining the unnatural colours above described.*

* See page 49.

The size of Gall-stones, which have passed without destroying the patient, almost exceeds belief. I have in my possession the model of one, whose long diameter is two inches and a quarter, and whose short diameter is one inch and a quarter. The patient, from whom this passed, suffered for five months the most acute pain. From the magnitude of the stone, I should believe that ulceration (in consequence of inflammation) had taken place between the duct and the duodenum, and that thus an aperture was made for the stone to pass into the intestines, as it is unlikely, that the duct could admit of such distension.

CHAPTER IV.

The Pancreas.

I DO not know of any symptoms, which will positively point out an incipient, or indeed a considerably advanced disease of the Pancreas, though I think it may be generally detected by a negative manner of reasoning, if I may be allowed the expression.

In all the cases of diseased Pancreas, which have fallen under my notice after death, there was always during life more or less of a deep-seated pain* in the region of the stomach, and more or less of sickness with emaciation; so that I am inclined to believe, that in diseased Pancreas these

* By placing one hand upon the back, and the other upon the stomach, and by using considerable pressure, the patient will complain of pain deep-seated under the hand.

symptoms are never absent, and such indeed is the opinion, which medical men have commonly adopted.*

By negative reasoning,† therefore, I mean, that where we meet with these symptoms, unattended by any others, that mark an original disease of the stomach—of the posterior part of the liver,—of the gall-bladder or ducts, or of the small intestines, we may pretty securely pronounce that the disease is situated in the Pancreas. This I allow is not altogether so satisfactory as positive evidence, and it may be objected moreover, that this description implies a previous knowledge of three or four other diseases: with all these objections, how-

* See for this symptom, Morgagni de Causis et Sed. Morb. Epist. xxx. Art. 8—9—11—13.—See also Simson de Re Medicâ, p. 131.—"Is enim (Bonetus nempè) (quod et ipse aliquando cadavera incidens animadverti) pertinaces sæpè vomitus non aliunde quam à schirris hepatis, *Pancreatis*, aut mesenterii ortas esse evincit."

† There is authority for this mode of description in the definition of Peritonitis, by Dr. Cullen—Peritonitis—Pyrexia; dolor abdominis corpore erecto auctus: *absque propriis aliarum phlegmasiarum abdominalium signis.*

ever, it is the best and only way, which I am enabled to point out, and it has in several instances led me to a just prognostic. I believe that a strict attention to those symptoms, which denote the other diseases here specified, will seldom fail to assist us to form a right judgment of this.

It may be here asked, what particular benefit is to be derived from this distinction; inasmuch as it is imagined, that no remedy has ever yet been discovered, which has specific powers to remove diseases of the Pancreas. Yet it will be allowed that it is of great consequence to arrange diseases with as much accuracy as the case will admit, that a disorder of a curable nature may not be confounded with one of a more hopeless kind; as by this confusion the patient will be deprived of the advantage, which he might otherwise have received.

When the disease of the Pancreas has so far advanced as to produce a great degree of emaciation, this gland may be distinctly felt, by pressure on the abdomen. When

it is itself alone diseased, the body is often reduced to the utmost state of emaciation, and the integuments of the abdomen appear almost to rest upon the spine. This appearance therefore of the abdomen, when it occurs, might distinguish diseased Pancreas from schirrous liver or enlarged spleen, in which cases the patient before death, has almost always a considerable enlargement of the belly. In the same way also this will distinguish it from affections of the mesenteric glands, for here too, before death, the abdomen becomes enlarged.

Ascites is not always an attendant upon a diseased Pancreas, yet as it often arises from this cause, we can never safely pronounce, when Ascites is present, that the Pancreas is *not* in a diseased state.

There are two kinds of disease usually met with in the Pancreas, schirrus and ulceration from common inflammation: Calculi are also met with in this gland, but this is a rare occurrence.

The Pancreas is endowed with so small

a degree of sensibility, that ulceration is found after death, when no pain or any symptom had previously existed, which could lead to a suspicion that inflammation was going on in that gland. As it is for this reason totally impossible to ascertain the extent of the mischief which has taken place, the Prognostic ought always to be guarded and unfavourable.

It may however now and then happen, that a small calculus (which is sometimes found in the Pancreas) will obstruct the passage of the secreted fluid, and thus give all the sensations of incurable disease in the viscus. It is much to be regretted that we have no symptom, which could possibly decide such a point, as I believe this to be a disease of the Pancreas from which the patient may sometimes be perfectly relieved by the efforts of nature. It is possible that a minute examination of the fæces might ascertain this point, but a calculus which could pass through the excretory duct would be so small that it is

more probable it would escape observation.

Dr. Wollaston has analysed the calculus from the Pancreas of an ox, and proved it to be phosphate of lime. From the colour and description of the calculi in Dr. Baillie's plate of diseased Pancreas, I am inclined to believe that they are also phosphate of lime.

The remedies for a diseased Pancreas are as imperfect as the symptoms which mark its derangement. The principal circumstance to be urged in the plan of treatment is an attention to the state of the stomach and bowels. We must endeavour to restrain the efforts to vomit, and regulate the bowels to one evacuation in the twenty-four hours; these are most essential considerations.

Our chief reliance of interrupting any morbid change, that may be taking place, is in a strict adherence to a milk and vegetable diet, and a total abstinence from all fermented liquors. Should it happen, that milk

does not agree with the patient, the curd must be separated, (which is the part of the milk most difficult of digestion,) and the nourishment should consist chiefly of whey. The patient will thus after a few weeks be enabled to adopt the milk diet to the full extent, to which he should rigidly adhere for many months.

As the actual existence of any disease in the Pancreas is uncertain, in the present state of our knowledge; so, I must confess, the efficacy of a milk diet to remove such disease cannot be thoroughly established, until we have more unequivocal proofs, on which to rest our conviction.

CHAPTER V.

The Spleen.

THE symptoms which attend the diseases of the Spleen, are almost as obscure as those which attend the diseases of the Pancreas.

It is subject to inflammation of its peritonæal coat in common with all other glands, to which that membrane is extended: but I have never met with inflammation or consequent suppuration in its substance.*

It has appeared to me to be affected with a *swelling* of its substance,† which may perhaps arise from a larger quantity of blood being conveyed to it, by the arteries,

* Scire ergo oportet, præ cæteris corporis partibus Lienem rarò ab inflammatione suppurare.—Simson De Re Med. p. 154.

† See Morgagni de Sed. &c. Epist. xxxvi. Art. 17 and 23.

without however these arteries taking on that action, which is the essence of inflammation.

This indolent swelling may be discovered by an attentive examination of the abdomen in the region of the Spleen. The patient usually complains of a sense of fulness (rather than pain) on the left side; though frequently the swelling will proceed to a very large size, without occasioning any uneasiness whatever; and, when it is very large, it may be distinctly felt by the hand. It more commonly, either of itself or assisted by medicines, subsides again to its natural size, though sometimes it remains permanently enlarged, and after reducing the body to great emaciation, terminates in an incurable Ascites.

The patient, under this disease, can only lie upon the left side. The countenance is always very sallow, though I never observed, that a true Jaundice accompanied this disorder. The patient is also subject to hæmorrhages from the nose. I have seen

a Spleen of this enlarged sort, which weighed three pounds two ounces; but the structure appeared perfectly natural: By its pressure on the surrounding parts it had occasioned ascites and death.*

A long continuation of intermittent fevers, especially of quartans, give a tendency in the Spleen to swell: On what this depends it is difficult to understand.

The inflammation of the peritonæal coat of the Spleen must be treated as acute inflammation of any other part of the peritonæum, namely, by venæsection, purging, and the antiphlogistic diet.

The indolent swelling or enlargement of the Spleen† will very commonly subside

* See Duncan's Med. Com. Vol. 17, p. 497.—There is here an account of a Spleen which weighed eleven pounds thirteen ounces, and yet it retained its natural structure.

† I have once seen a Spleen of this sort, which contained within its substance two very large Hydatids. They were spherical, and the diameter of each was about three inches. The external coat was cartilaginous—the inner coat soft and pulpy—they contained a limpid transparent fluid, in which floated several other hydatids of a smaller size.—There was no appearance of ulceration in the substance of the Spleen.

of itself, though this may be hastened by mercurial friction upon the abdomen, and by the use of purgatives: It sometimes happens, that there is a grest degree of tenderness produced by an enlarged Spleen about the articulation of the false ribs to the spine; this will be removed by either cuping or leeches.

Small doses of Calomel in union with the Succus spissatus Cicutæ, answer the double intention of allaying the irritation of the stomach, which frequently attends this disease, as well as promoting absorption; the following pill therefore may be ordered:

℞ Calomelanos gr. ss.
Succ. spissat. Cicutæ gr. iv.
Contunde simul et fiat pilula bis vel ter die sumenda.

The patient should persevere in the mercurial course till the mouth is slightly affected, and then it should be gradually laid aside. Milk, gruel, and a small quantity of animal broth should be the diet of the patient.

The most favourable symptoms are a diminution of the uneasy sensation in the left side, and an improvement in the colour of the skin. The most unfavourable are the swelling of the left side increasing, and the lower part of the abdomen becoming enlarged, and if this gives a sensation of fluctuation, the case is almost hopeless.

CHAPTER VI.

The Kidneys.

The Kidneys, in addition to the causes of inflammation common to all other parts of the body, are peculiarly exposed to it from the formation of urinary Calculi. I should however observe here, that the capsule of the Kidney is more subject to inflammation from the common causes, but that the substance of the Kidney has never appeared to me in a state of ulceration without its having been produced by Calculi, or from the operation of external injury, or from Hydatids.

The symptoms, which indicate a disease in the Kidneys, are pain in the loins, more or less of nausea, an accelerated pulse, sometimes a frequent desire to make water, sometimes the urine almost suppressed.

The urine is also frequently turbid from an admixture of blood, which gives it more or less of a brown appearance. We find likewise a numb pain in the buttock of the side affected, extending down the thigh, and often (though not always) a retraction of the testicle. I have sometimes observed a soreness in the testicle, without its being at all retracted.*

The pain, when a stone is in the ureter, is infinitely more acute than when there is inflammation of the substance of the Kidney, but the Pulse is not so frequent: The other symptoms are the same, to all which may be added a sympathetic pain on the skin of the abdomen, midway between the

* Sydenham has observed, that a pain in the region of the Kidneys, and all the other symptoms of a nephritic paroxysm will sometimes take place from Hysteria—ita ut ægrè admodum dignosci queat, utrum hæc symptomata ab incluso calculo, an vero ab effectu aliquo Hysterico enascantur; nisi forte casus aliquis acerbior ægræ animum paulò antequam corriperetur discrucians, aut materiæ viridis per vomitum rejectio, symptomata ista adfectioni potiùs hystericæ, quam calculosæ tribuenda esse docuerint.—Diss. Epist. ad Guliel. Cole, M. D.—Ed. Lugd. Batav. 1726. p. 390.

os ilium and navel, which I have often remarked, where I have afterwards had full evidence of a stone having been in the ureter.

This sympathetic pain, which is much increased by the slightest pressure, has been so acute in some cases as to arrest the whole attention of the patient; and it has required considerable address to convince him, that it was not inflammation of the intestines under which he laboured. The practitioner might also be misled as well as the patient, if he did not weigh (as he should in every case) the aggregate force of all the symptoms collectively, before he pronounces his opinion of the disease.

I have in two instances known this sympathetic pain instantly disappear upon the Calculi passing into the bladder, which calculi were voided by the patients after the pain in the back, and on the abdomen, had left them only a few hours.

It does not often happen that there is such decisive proof of a stone having passed

through the ureter; for, more commonly after entering the bladder, it remains there without producing any uneasiness for a considerable time; often for a year, or even for two years, and then is discharged through the urethra.

Disease in the Kidneys may be distinguished from rheumatic affections of the muscles of the back, by the nausea, variety both as to quanity and quality in the urine, by the pain remaining much the same in every position of the body, and by the affection of the testicle: Whereas in Rheumatism the pain varies, is most felt upon raising the body, which had been previously bent; and moreover in Rheumatism there is no nausea, no variety in the discharge of urine, and no affection of the testicle.

It may be distinguished from inflammation of the cellular membrane under the psoæ muscles, by the pain not being increased by rotating the thigh, by the nausea, by the affection of the testicle, by the variation in the flow of urine, and I

might also say, if it has continued long, by there being no wasting of the flesh. In inflammation of the psoæ muscles, there is no nausea, no affection of the testicles, the pain is deep-seated, and much the same in all positions of the body, though considerably increased on rotating the thigh, and if the disease has continued long, there is a great wasting of the flesh.

Calculus in the Ureter may be distinguished from disease of the intestines, by the seat of the pain being in the back, by the affection of the leg and thigh, by the retraction and soreness of the testicles, and by the pulse remaining quiet, all of which symptoms are wanting in inflammation of the intestines.

It is not so difficult to distinguish an affection of the Kidneys from diseases of the other parts surrounding them, as it is to distinguish it from the diseases of the other parts of the urinary system.

The sensations are communicated so readily by sympathy from one extremity

to the other of this system, that the same set of symptoms attend, wherever the derangement in the urinary organs may exist. For example, a stone in the bladder shall give all the sensations of a disease in the Kidneys; and again, a calculus in the Kidneys shall give all the sensations and symptoms of a disease in the bladder. This obscurity will shew the great caution necessary in pronouncing on the disorders of the urinary passages.

Another circumstance no less remarkable, and which too will point out the necessity of caution in the prognostic, is the little disturbance, which great and even fatal diseases in this system, occasion in the constitution. Large stones have been repeatedly found in the bladder, and extensive ulcerations in the Kidneys, without their having in the least diminished the bulk of the body, or shewn any symptom, during life, by which their existence had been suspected.

When there are but obscure symptoms,

which denote that some morbid change is taking place within the abdomen, this circumstance of undiminished bulk might help materially to distinguish diseases of the Kidneys from any chronic affection of the mesenteric glands, where there is uniformly the greatest degree of emaciation.

A proneness in the body to waste or not, as the same disease shall happen to be situated in this or that part, is in itself a circumstance very remarkable; and as an attention to this proneness may help to lead us through the obscurities, which too often attend internal complaints, it is a subject well worthy of further consideration.

To assist us in this inquiry, it may be right to specify a few examples, where the difference of the effect of disease on the bulk is most striking. Let us take the two cases, of a diseased state of the mesenteric glands, and a diseased, or scrophulous affection of the breast. In the former we shall find there is great emaciation; in the

latter, none at all.—In an ulceration of the small intestines, great emaciation takes place; in schirrus of the rectum, none.—In a disease of the gall bladder, which is subservient to the liver, the bulk of the body is rapidly diminished; but in a disease of the urinary bladder, which is subservient to the kidneys, scarcely any diminution of bulk is to be perceived.—In an abscess of the liver the body becomes much emaciated; but in an abscess of the kidneys the bulk is not diminished.

If we examine into the functions of those parts, the diseases of which do or do not occasion emaciation, we may perhaps be led to the true cause of this difference of their effect on the bulk. In order, however, to understand more clearly how the functions of these parts bear relation to each other, it may be necessary to premise, that the glands of the body are divided into those, which secrete a fluid from the blood, for the use of the system, and those which secrete a fluid to be discharged from it.

The former may be termed glands of supply; the latter, glands of waste.

The small intestines, in consideration of the great number of absorbents with which they are provided for the repair of the system, may be considered as performing the office of glands of supply.

The large intestines, on the contrary, may be considered as performing the office of glands of waste; inasmuch as they are furnished very scantily with absorbents, and abundantly with a set of glands which secrete, or withdraw from the system a fluid, which serves to lubricate the canal for the passage of the fæces, and which itself, together with these fæces, is destined to be discharged from the system.

I have often imagined that this mode of considering the subject might, in many cases, assist us in approaching to the seat of a chronic disorder, by deciding where the disorder is *not* situated, and consequently by contracting within narrower limits the difficulties of our researches.

Thus the symptom exhibited by the patient, either in retaining his bulk, or in being emaciated, might serve as a diagnostic, according to my conception, for the purpose of deciding, whether the disorder is seated in the glands of supply, or in the glands of waste.

The glands which secrete a fluid to be employed in the system, as well as the glands of direct supply, may be considered the Liver, the Pancreas, the Mesenteric glands, perhaps the Stomach, and the small Intestines: and the glands of waste are the Kidneys, Breasts, Exhalant Arteries, and the large Intestines.

In an abscess of the Liver, and an abscess of the Kidneys, both of which glands frequently run into suppuration, without exhibiting any pain in the part affected, it seems impossible to decide in what part of the system the derangement manifested in both these cases by the Hectic fever, is situated.

According to the foregoing idea, if Ema-

ciation takes place, we might then determine that the disorder must be situated in a gland of supply; and thus we should be led to decide, that the disorder was certainly *not* in the Kidneys, consequently we should be secured from the danger of misapplying our remedies upon a part which was not affected.

The same Hectic attends a chronic disease of the mesenteric glands, and of the small intestines: and here likewise, if emaciation does *not* take place, we should decide that the disorder was not situated in these parts, or in the liver.

Now it is surely of considerable importance to determine where the disorder is *not* found, that our enquiries may be solely directed to those parts in which it is to be found.

If this position respecting the bulk of the body, under disease, should be admitted as true, will it not afford a probability that the Spleen, whose diseases produce great emaciation, is a gland of supply?

What has been here advanced must be considered as applying to local diseases unattended by pain, as pain will itself sometimes waste the body, though sometimes it will not. Here too the wasting from pain seems to vary according to the part from which it proceeds. A stone in the bladder of urine, or in the Kidneys, nearly stopping the discharge of urine, and occasioning the greatest pain, will not in the least affect the bulk; but a biliary stone, under similar circumstances, will occasion great and rapid emaciation.

We must observe, however, that the presence of pain in a part would sufficiently point out the seat of the disease. It is only in chronical complaints, where the morbid changes are so gradual as to produce no pain, that these observations will particularly apply: and it is in difficulties of this nature, that we stand in need of every help to assist us in forming a right judgment.

But to return from this digression. The Prognostic, in diseases of the Kidneys,

should be guarded; for it is at all times impossible to ascertain the extent of the mischief, for the reasons above given. However, on the whole, I think, it may be reckoned a disease attended with little danger.

The Treatment.

The treatment, when the disease is inflammation of the substance of the Kidney, consists, in the first place, of taking away blood from the arm, in enforcing the antiphlogistic diet, and in keeping open the bowels in a manner the least irritating. The following directions therefore may be given.

Fiat venæsectio ad ℥x.

Sumat Ol. Ricini ℥i. ex Aquæ Menthæ Piperitidis ℥iss. quamprimùm: et post horas sex sumat haustum infra præscriptum.

℞ Ol: Amygdalæ.
Muc. Arab Gum. ā ʒij.
Aq. Rosæ ʒx.
Mannæ Opt. ʒi.

Misce, fiat haustus, sextâ quâque horâ sumendus.

The diet should be gruel, or bread and milk.

It often happens that the nausea, which is constantly present in this disease, prevents the use of any oily medicine. In this case, great advantage will be found from throwing up clysters of warm water: and we should desist from all endeavours to give medicine by the stomach, until the nausea is removed.

If the pain and heat in the region of the Kidney does not abate in twelve hours, and the pulse remains equally hard and frequent, the venæsection may be again repeated: and I think (except perhaps in some very uncommon instance) that two venæsections are as many as are required in inflammation of the Kidneys.

As I have before stated that inflammation of the Kidneys generally arises from a Calculus irritating the pelvis of the Kidney, it is advisable, after the pain and fever have been removed by the measures above recommended, to order some medicine, which

has power to dissolve the more common sort of calculus, as I must presume that we have not as yet been able to ascertain the exact species, with which the patient is afflicted. He should therefore take every day one pint of double Soda water, the use of which he should continue for a great length of time.

If, in addition to the other symptoms, the pain has come on very suddenly, and is extremely acute, we may safely conclude, that a calculus has passed into the Ureter: in which case we should have recourse to one bleeding from the arm: after this, to the warm bath; or the patient should sit in warm water in (what is termed) a hip bath. A grain of solid opium should be given every second or third hour, according to the urgency of the pain.

Glysters of starch, with thirty or forty drops of Tinctura Opii are never to be omitted; and these too, according to the urgency of the pain, may be repeated every three or four hours.

When the pain has subsided, it becomes right to give opening medicines: before this period every thing would probably have been rejected by vomiting; and even now, unless in union with Tinctura Opii, few medicines will stay upon the stomach. The best of all is the oily draught, with ten drops of Tinctura Opii in each, every four hours. In case this should be rejected, about two drachms of magnesia vitriolata in Lact. Amygdalæ, with or without five drops of Tinctura Opii, will often answer every intention.

Blisters and Diuretics should be avoided.

I have said above that we should direct a solvent for the *most common kind* of calculus. Dr. Wollaston, in his valuable analysis of gouty and urinary concretions, (published in the Philosophical Transactions, in the year 1797,) has proved, that there are four distinct kinds of urinary calculi.*

* Aretæus observed, that there were different kinds of calculi in the bladder. See Χρονιων Παθων Βιβλ. Β. Κεφ. γ.

For the removal of such as are already formed, or for the prevention of any future formation, it becomes absolutely essential to make every endeavour to discover, with which sort the patient may be afflicted;*

* I subjoin a concise statement of the properties of the four species of calculus, distinguished by Dr. Wollaston, by which it may be seen how they are acted upon by an acid, or by an alkaline solvent; and by which also it will appear how even the smallest fragment of either of them may be easily recognized.

1st. Scheelian, or (as Dr. Pearson has named it) Uric Calculi. These Calculi are wholly, or principally composed of Uric Oxyd, or Urat of Ammonia. They are not acted upon by muriatic acid, but are soluble in pure alkaline leys. Before the blow-pipe they are wholly consumed.

2d. Fusible Calculi.—These are composed chiefly of phosphate of lime, and the triple phosphate of magnesia and Ammonia. They are not acted upon by pure alkaline leys, but are readily soluble in Muriatic acid.—Before the blow-pipe they melt into white enamel.

3d. Mulberry Calculi.—These are composed principally of oxalat of lime. They are not acted upon by alkaline solvents, or readily by acids: but in the state of fine powder they may be slowly dissolved by digestion in muriatic acid.—Before the blow-pipe they are reduced to lime.

4th. Bone-earth Calculi.—These are composed chiefly of phosphate of lime. They are soluble in muriatic acid.—Before the blow-pipe they become somewhat whiter, but are wholly infusible.

In a former part of this Treatise, I conjectured that the Calculus of the human Pancreas did not differ in its compo-

for without such discrimination our practice will be completely empirical, and may help to increase that very disease, which it is our object to remove.

The absurdity of persevering in a plan of alkaline medicine, to dissolve a calculus, which is not in the smallest degree acted upon by an alkali, but on the contrary by an acid, is sufficiently apparent.

I am here alluding to the Scheelian, and the fusible calculi: the first being soluble in Alkalis, and not in the Muriatic acid;—the second, soluble in the Muriatic acid, and not in the Alkalis.

The fusible Calculus, or rather the fusible sand, as mentioned by Dr. Wollaston, I am inclined to believe, is a much more common occurrence, than is usually suspected. Since my attention has been called

nent parts from a Calculus, which was found in the Pancreas of an Ox:—but, since the sheet containing that observation has been printed, I have been favoured by Dr. Baillie with a specimen of Calculus from the human Pancreas, which, I find, consists entirely of carbonate of lime: my conjecture, therefore, respecting it, was not well-founded.

to the subject by the above paper, I have detected it five times, and collected specimens from each of the patients.

The benefit obtained from an acid solvent in this species of Calculus, I have observed is much more rapid than could be expected from the usual effect of reputed solvents in other cases of Calculus.

Six drops of Muriatic acid, in water, were given to each of these patients, and repeated every two hours. Two of them received immediate relief, not only from all the distress, which accompanies a common attack of gravel, (as it is called,) but also from a most painful restlessness, an excessive thirst, and a continued tendency to fainting, which symptoms seem in a peculiar way to attend this species of Calculus.

Two others of them experienced a relief as complete, though not quite so expeditious: and the fifth passed considerable quantities of the sand, loosely cemented together, during the whole time he was

taking the acid, under my eye: whether he was ultimately cured I am unable to say.

The manner in which a calculus passes along the ureter, I take to be precisely similar to the passage of the gall-stone along the ductus communis choledochus, viz. from the distension of the secreted fluid behind it.

This distension, then, (as in gall-stone) cannot take place, unless the ureter be completely plugged up, which is the reason, I conceive, that we observe patients so frequently complaining for a long time together of pain, and uneasiness in the region of the kidneys: still, however, during this time no stone passes, until they are suddenly seized with very acute pain, and suppression of urine, after which they will be relieved from all their symptoms by an abundant flow of urine, and perhaps, together with it, the Calculus which caused the obstruction.*

* Aretæus, in describing the passage of a calculus from

In the previous state the stone is incapable of closing the ureter, so as to occasion the distension necessary to carry it along, till, either by the accident of its moving its situation, or by the accession of new matter, it becomes a complete plug. It is in this state, that the urine, collecting behind, will, at the same time that it causes all the pain, work out the natural cure of the disease, by distending the canal, so as to permit the Calculus to pass along to the bladder.

Hæmorrhage from the urinary passages is not uncommon: it is usually occasioned by Calculi, or by external injury. When

the ureter into the bladder, says, "Κην ές τον Κυστιν εμπεση, υρων ἄλις ὑδατωδέων εκχυσις." Χρονιων Παθων Βιβλ. Β. Κεφ. γ'.

See also Lommius Med. Obs. ed. Edinb. 1752, p. 243. "Quum autem renis dolorem calculi sequetur excretio, is, "ubi in caput impegit ductûs urinarii, penitus efficit ut "urinæ meiantur tenues, paucæ, subaquosæ, et haud rarò "etiam totæ cohibeantur: ubi verò vel remeat hinc in "cavum renis calculus, aut certè ubi foras in v sicam excu- "titur protinus ea redditur urina, quam modò proposui: "ut rectè dixisse Hippocratem existimem, repentino renum "dolore cum mictionis defectu, calculorum aut crassarum "urinarum excretionem portendi."

See also Hippocrates, ed. Lugdun. Batav. by Vander Linden, Vol. I. p. 583, art. 71.

it takes place to any amount the mind of the patient is impressed with the greatest alarm and anxiety: we may, however, securely promise him, that his complaint is devoid of danger, as the bleeding will soon either subside of itself, or be readily restrained by the application of iced water to the Perinæum and Pubes. The patient should take mucilaginous fluids, and abstain from fermented liquors and animal food.

CHAPTER VII.

The Stomach.

THE difficulties which present themselves, when we reflect on a systematic arrangement of the diseases of the Stomach, are so many, and so great, that the writer finds himself perpetually embarrassed to select and discriminate his materials with precision, and perspicuity.

After all our labours, whatever skill and care may be adopted, a theme like this must be imperfectly discussed, as it is involved with a variety of speculations, which in some measure include the whole range of pathological reasoning.

It is universally acknowledged, that the Stomach is the organ, which performs the most important offices in the frame, and that it is not only exposed to certain disorders peculiar to itself, but that it is like-

wise the great Sympathizer with most of the local and constitutional derangements of the system.

We shall understand how the difficulties of the subject are increased, when we consider, that these sympathies, unless they are minutely arranged, may lead us into considerable error in point of practice; as they appear on some occasions to be an effort of nature to relieve, and on others they seem to be directed to no beneficial purpose, nay oftentimes to aggravate the complaint, on which they depend.

I shall first begin with what is called "*a pain in the Stomach.*" This, when it does not arise from an organic disease of the Stomach, will not affect the Pulse: by this I mean, that although the Pulse may be frequent from irritability of habit, yet it is not more frequent, when the pain is present, than when it is absent.

The pain in some cases is most felt, when the Stomach is empty; in others, when the Stomach is full: of course

therefore it cannot in both cases be considered as arising from the same cause; or that it can be removed by the same remedies. On the contrary we find, that precisely the opposite measures succeed in the two cases; as, the application of food in the one, and the subtraction of it in the other.

That pain, which is most felt when the Stomach is empty, seems to arise from an altered and increased secretion of the glands of the mucous membrane of that organ.

This fluid, by its acrimony (if I may be allowed the expression) irritates the nerves of the Stomach, and thus causes pain. When it is secreted in small quantities, it may be so enveloped by any food that is taken, as to render it inert; or when it is secreted in larger quantities, it may be thrown up, after causing violent pain, by vomiting; and in this state it constitutes what is called Pyrosis, or Water Brash.

The fluid which is thrown up is usually tasteless, though sometimes it is slightly acid. It does not always produce sympathetic

headache. There is a frequent desire to take food, attended with thirst; and there is also a considerable wasting of the flesh.

The Water Brash is a disease frequently met with in Scotland and in Ireland, and is more common in women than men.

I observed it to take place more especially amongst that class of the inhabitants who lived almost entirely upon vegetable food, that is, potatoes; to which cause, in their case, I am inclined to attribute this altered secretion of the glands of the Stomach. I say in their case, because their living chiefly upon the vegetable diet of potatoes, seemed to be the only peculiarity in their mode of life.

At first I suspected that the frequency of the complaint amongst this order of people arose from the immoderate use of ardent spirits, but after the minutest investigation, I was convinced, that this opinion was erroneous.

Had the disease arisen from the intemperate use of spirits, we should have ex-

pected to find it more frequent among men, who are more addicted to immoderate drinking. On the contrary, I find, on consulting my notes, that the disorder is more prevalent with women than with men, in the proportion of five to one.

I must remark, moreover, in order to shew how unfounded the opinion is respecting the use of spirituous liquors, that the women in the north of Ireland are remarkably temperate in their own country; and again, that the same order of women when they are transplanted to this, and contract the pernicious habit of drinking spirits, are free from the complaint.

I have known a patient under this disease bring up, after suffering violent pain at the Stomach, above a pint of perfectly tasteless and limpid fluid, three or four times in the day. The body also, at the same time, was brought to the utmost state of emaciation, although the quantity of food taken daily had been very considerable.

It is not difficult to conceive that certain

diseases are to be found, which may arise from the same cause, and be cured by the same remedies, though they appear totally dissimilar to each other in their more obvious symptoms. Thus, I imagine, we might trace an affinity between the Water Brash, and the Diabetes.

Dr. Rollo supposes, that among the people of Scotland, who labour hard, eat heartily, and live chiefly upon vegetable food "a stomach disease" (the Pyrosis) "is frequently produced from probably the "formation of some irritating matter, which "acting on the Stomach would produce the "peculiarly increased action in the Diabetes "Mellitus."

In the very same page, Dr. Rollo perceives a similar affinity between the Gout and Diabetes; as he observes, that "there "may probably be some causes producing "a change of the gastric fluid from want "of action in the Stomach, as is supposed "in Dyspepsia, which would stimulate, or "irritate and produce an increased morbid

" action of the Stomach, as well as further " secretion and vitiation, giving rise to " Diabetes. Such a state of Stomach often " occurs in Gout, but it does not continue " so long as to form the other disease." (Page 393-4. Ed. 2.) By such a mode of reasoning, I imagine, we might prove the affinity between Diabetes, and any other disorder arising from a dyspeptic stomach.

As Dr. Rollo only states the affinity of Water Brash to Diabetes, through the medium of Dyspepsia, as a general affection of the Stomach, I shall beg leave to state the resemblance between these disorders in a more particular manner.

In both there is pain in the Stomach, a craving appetite, and an increased secretion of fluid from the system, which wastes the body: and, moreover, an abstinence from vegetable food, will materially help to remove both the one and the other.

We have here the three great leading symptoms common to each compiaint, by which, I think, their affinity may be recog-

nized; and the difference between the disorders, though apparently striking, is in fact, only a difference in the mode, by which the secreted fluid is discharged.

In Pyrosis the fluid secreted by the glands of the Stomach, is partly brought up by vomiting, but in the Diabetes it is rapidly taken up by the absorbents, and carried off by the kidneys.

In the case of Captain Meredith by Dr. Rollo, a fluid was brought up from the stomach, sometimes sweet and sometimes sour; and it is also to be collected from that case, that as often as there was any vomiting, either by nature or by art, the urine became less in quantity, and partaking more of the nature of common urine.

In Water Brash the fluid brought up is frequently limpid and tasteless, as it is sometimes in Diabetes; and if future experiments should ascertain that it runs into fermentation, this opinion would be considerably strengthened.

It is worthy of notice, that in one case

recorded in the work of Dr. Rollo, as a communication from Dr. Gerard of Liverpool, the patient is stated to have been subject to the disorder of Water Brash. (p. 184.)

There is a very curious case in Morgagni related of himself, in which we shall perceive in the strongest manner, how even a very slight cause, as it should seem, affecting the Stomach, may produce the most violent consequences upon the secretions of the glands. He tells us that by chance he once swallowed a small leaf, which, after making him sick and occasioning considerable pain at the Stomach, produced a discharge of sixteen pints of fluid in twenty-four hours; and that this watery Diarrhœa ceased, when the offending matter was dislodged from his Stomach by vomiting. (Epist. xxxi. Art. 9.)

The affinity between Water Brash and Diabetes Insipidus is, I think, sufficiently apparent, yet it must be owned that there exists a considerable difficulty respecting

the sweetness of the urine in the Diabetes Mellitus.

To discuss this difficulty would lead me into a theoretical enquiry, which is foreign from the purpose of the present Treatise; yet I must beg leave to observe, that after a careful consideration of the subject, I am strongly inclined to believe that the sweetness is not generated by any morbid action of the Kidneys, but that it is formed by some process which takes place in the Stomach and intestines, though I do not pretend to explain the peculiar action in which this process consists.

I must moreover observe, that the presence of sugar in the primæ viæ has appeared to me in several cases to have produced a temporary Diabetes. A gnawing pain of the Stomach, a craving desire for food, and an increased flow of urine, exhibit the symptoms of Diabetes; and I have known these to have constantly succeeded the use of sugar in the morning in several dyspeptic patients, and to have as constantly disappeared when it was omitted.

It may be added as a further illustration of the affinity between Water Brash and Diabetes, that practitioners have uniformly found the greatest benefit in Diabetes from that class of medecines, which have at once acted upon the glands of the stomach; such as bark, kino, opium, alum, camomile, &c.

So convinced was Mead of the efficacy of astringents, that (however inconsistent it may be with his idea of its being a liver disease) he states in unqualified terms, that "alum whey is a cure for Diabetes." In the communications transmitted to Dr. Rollo, many cases will be seen which were removed by the use of the above remedies.

The Treatment.

We have now discussed the nature of that disorder with which the Stomach is most affected when it is empty: and in this inquiry, we have been led into certain observations respecting the affinity between Diabetes and this state of Stomach. Let

us next proceed to consider the treatment of the disease itself.

Opium, in union with astringents, is the great remedy to which we must resort on this occasion; and that their application may be constant, it is advisable, that they should be administered in the form of pill, as in this form the action is more gradual and more lasting.

In the incipient stages the following pill may be prescribed,

℞ Pulv. Kino ℈ss.
Opii purificat: gr. ss.
Muc. Arab. Gum. q s. ut fiant pilulæ duæ quartâ quâque horâ sumendæ.

I prefer the Kino to any other astringent, because unless there is a Diarrhœa present, it appears to have no tendency to confine the bowels. In this drug therefore you have a medicine which exerts its powers to restrain the discharge of the glands when they are secreting too much, without exerting any such powers over the glands when they are acting naturally.

It appears to me not difficult to conceive that an astringent shall be able to contract a vessel already too much relaxed, to its natural standard; but that the same astringent shall be unable to contract it further. If this be allowed, we have the advantage of possessing an agent, which shall restrain the unnatural secretion of a gland, but which shall cease to act when this purpose is obtained. Whether such be the true method of accounting for this peculiarity, or whether it may arise from the insolubility of Kino except in a large quantity of fluid, I do not pretend to determine; but I can with confidence assert, that the effect of Kino will be found such as I have above stated.

A Bolus composed after the following formula, may frequently be exhibited with advantage,

℞ Aluminis gr. vj.
Pil. ex Opio gr. iiss.
Misce, fiat Bolus ter die sumendus.

In case the bowels are at all constipated

they should be kept regular by castor oil, or by a pill of rhubarb, of five grains, every morning; either of which I prefer to the neutral salts.

Emetics are not of the least advantage; on the contrary, they have appeared to me to aggravate rather than relieve the sufferings of the patient.*

Should the fluid thrown up be found acid, an union of magnesia, opium, and an astringent may be adopted, as in the following formulæ,

Sumat pilulas duas è Kino et Opio, antea præscriptas ter quotidie et superbibat haustum infrà præscriptum,

℞ Aq. Carui ℥iss
Magnes: ustæ ℥ss.

Misce, fiat haustus.

When the secretion of the fluid appears moderated, the tone of the Stomach may be restored by a chalybeate water, or by the following pills,

* Vomitus inutilis est gracilibus, et imbecillum stomachum habentibus. Celsus, Lib. I. Cap. 3.

℞ Ferri vitriolat:
Natri ppt:
Sacchar: alb: ā ʒss
Pulv: Gum: Myrrhæ ʒss

Contunde simul et ft. pilulæ triginta, è quibus sumat duas ter quotidiè.

The diet should be plain-dressed animal food, with a small proportion of vegetables. The patient should be particularly cautious not to take a large quantity of bread. He should moreover abstain entirely from fermented liquors, as he should from hot broths, fish, and in some cases, from eggs.

The Pain of the Stomach, which is most felt when it is full, would appear to arise from irritability of the muscular coat of that organ, and not to be at all connected with the glandular secretions of it; for unless the pain be called forth by food being received, it will rest perfectly at ease.

The food will remain down perhaps half

an hour (or more) before any uneasy sensations are created. These will go on increasing till the food is returned again, very little changed from the operation of digestion.

This disease is attended with sympathetic head-ache: it seems peculiarly to attack Chlorotic women, and Hypocondriacal men; I am therefore inclined to believe that it owes its origin to the muscular fibres of the Stomach partaking of the general irritability of all other muscular parts in an irritable habit; and, I think, that the advantage derived from the method of treatment hereafter mentioned, will add considerable strength to this opinion.

It may be distinguished from that pain which is produced in a stricture of the Cardia, by the pain not being perceived *the instant* the food is swallowed,—by the seat of the pain not being confined to a spot, (both of which circumstances attend a stricture of the Cardia)—and by there having existed constitutional derangement

previous to the stomach affection; whereas in stricture of the Cardia the constitution is *subsequently* affected.

It may be distinguished from Schirrus, or Cancer of the stomach, by the pain not being produced, except after taking food; whereas, in either of the former cases, there is more or less of constant pain; and in cancer, what is brought up from the stomach is usually very offensive, and is also discoloured, more or less, of a dark brown hue; in cancer too, we may observe that there is seldom sympathetic headache.

As I consider this a local disease, in consequence of constitutional derangement, the method of treatment must, for the most part, be constitutional; though, at the same time, regard may be paid to the Stomach itself.

In what is called the green draught of Moses Griffith, is comprehended every ingredient which will meet this intention, as follows:

℞ Ferri vitriol.
Natri ppti. āā gr. vj.
Aq. Pimento
Aq. distill. āā ʒ vj.
Pulv. Gum. Myrrh. ℈j.
Misce, fiat Haustus ter quotidiè sumendus.

Should it happen that the pain in the Stomach is particularly violent, five drops of Tinct. Opii may be taken half an hour before dinner; or, the same quantity may be added to each dose of the above medicine

A blister applied to the region of the Stomach, should likewise be adopted in cases which are unusually obstinate.

As the bowels are generally costive, this should be guarded against, by twice in the week taking four grains of calomel at night, and three drachms of Magnes. vitriol. in Aq. Menth. Pip. the following morning. The diet should be warm animal broths, vegetables of all sorts, a small quantity of solid animal food. All fermented liquors should be avoided.

In the two states of Stomach which I have just described, there is vomiting in consequence of Pain. I shall now proceed to another state of disease belonging to this organ, in which there is vomiting, in consequence of Nausea, unattended by pain.

This affection of the stomach attacks the patient in paroxysms, after considerable intervals of perfect health: It seems to depend upon the nerves of the Stomach. Under this head may be comprehended sympathetic vomitings, whether from a local, or from a constitutional cause. What is thrown up is usually small in quantity, and often sour: There is also frequently a sensation at the root of the tongue, and sometimes through the whole length of the œsophagus, which constitutes what is called Heart-burn.

Air is also expelled from the stomach in large quantities. This air has in several

instances, appeared to me to possess the odour of hepatic gass.* There is usually great headache, and the pain is often confined to the ball of one eye. The Tongue is moist and white. The Pulse but little altered from natural; and there is no thirst.

A predisposition to this state of Stomach appears to be hereditary: it will, more or less, distress the patient through the middle part of his life; for children and persons of advanced age appear to be less susceptible of the disorder.

For this exemption, I think, we may in part account, from the influence which the mind seems to possess over the nerves of the Stomach. In infancy and old age the feelings are not so acute as in the intermediate periods of life, and they have

* Sydenham, in the Tractatus de Podagrâ, observes, "Quin etiam multis aliis symptomatis infestatur æger, ut "venarum hæmorrhoidalium dolore, *ructu nidoroso* cibi jam "manducati, et in ventriculo putrescentis gustum referente, "&c." Aretæus has also recorded the same thing, "ερυγαι "ξυνεχέες, κακώδεες."

therefore, not such powers upon the operations of the body.

As a proof of this effect of the mind, a sudden fit of passion, or great joy, will sometimes instantly produce this state of Stomach: They will also sometimes instantly remove it, when it is present; and I have more than once known a necessity for any great exertion of mind to supersede the stomach affection, which has reappeared upon the necessity being withdrawn.

It may be distinguished from Pyrosis, by its not being so permanent a complaint —by there being no pain previous to vomiting—and by the fluid which is thrown up never being limpid and tasteless.

In the same way it may be distinguished from that vomiting which is occasioned by taking food, by the absence of pain. It may be distinguished likewise from any organic disease of the Stomach, by the absence of pai —by the fluid, which is brought up not being discoloured of a dark hue,

or being offensive to the smell—by the sympathetic headache—by the disease invading the patient after considerable intervals, and I might also add, by its occasioning very little emaciation.

As this is a disease occasioned usually by the ingesta offending the nerves of a stomach which is predisposed to the complaint, either by their quantity or quality, the obvious method to be adopted when it is present, is to remove the offending matter, either by an emetic or by a purgative. The following purgative may be particularly recommended,

℞ Fol. Sennæ
Flor: Chamæmel. āā ʒiij.
Zingiber: contus. ʒss.
Aq. fervent: ℥iij.
Macera per horam, et cola,
℞ Colaturæ ℥ij.
Magnes: vitriol: ʒij. M. fiat Haustus.

After the operation of this purgative, the following draught will probably complete the removal of this attack,

℞ Mist: camphorat: ℥iss.
Spt. Ammon. comp. gtt. xxv.
Sacch. alb. ℈ij.
M. ft. Haustus.

To remove a paroxysm of the disease is less difficult than to prevent a recurrence of it: In the latter case, it must not be considered as an acute, but as a chronic complaint, which will require a chronic treatment. This consists in an attentive observance of the diet, a constant course of exercise, and above all, in preserving a regular state of the bowels.

Hot soups, or animal broths, and also fish, should be avoided, and the fat of meat, as should milk and eggs. Plain meats in moderation, of all kinds, with a due proportion of dressed vegetables, is the diet best calculated to remove the predisposition to the disease.

The patient should be directed to desist from all fermented liquors. Horse exercise is particularly beneficial, and should be strongly recommended. This, however,

is not always within the reach of the patient; who, in such case, should never fail to take daily, at least two hours exercise in walking, and the exercise ought always to be such, as to produce a gentle perspiration on the skin.*

As a medicine well calculated to correct this state of stomach, and also to secure a proper evacuation from the bowels, we may recommend half a pint of Seidlitz water, containing three drachms of Magnes: vitriol: every morning, or every other morning.

In this plan the patient must persevere for at least three months; and it is essentially necessary at all times, that the clothing should be warm, more particularly about the lower extremities.

It sometimes happens, that there is such a tendency to form an acid in the Stomach, that it becomes necessary to have a constant recourse to some medicine, which

* Exercitationis autem plerumque finis esse debet sudor, aut certè lassitudo, quæ citrà fatigationem sit. Celsus. Lib. I. Cap. 2.

may counteract its effects upon the nerves. This acid has the property of causing a sensation of heat about the Cardia, which sensation will often extend through the whole length of the Œsophagus, attended with a feel of rawness on its internal surface.

The acid may be so neutralised by any of the alkalis, or alkaline earths, that this particular effect will be prevented; but, it requires, as I have before said, a continued application of such remedies. The patient should therefore take the following pill, which will have the effect of not only destroying the acidity, but of strengthening the digestion,

℞ Natri ppti exciccat.
Extract. Gentian. āā ʒss.
Contunde simul et fiant pilulæ duodecem è quibus sumat duas sextâ quâque horâ.

This is one method, and that the more common one, of endeavouring to destroy the abundant quantity of gastric acid.

Sometimes, however, it abounds so much, that a greater quantity of alkali may be required to render it inert, than can with propriety be administered internally. In which case, I have frequently found complete relief obtained from the very opposite treatment, namely, by a more powerful acid.*

It has been observed, that the addition of a very small quantity of any of the mineral acids, will immediately put a stop to the acetous fermentation. Now, although there is no acid in a healthy stomach,† yet, when its powers have by any means been debilitated or injured, a fermentation analagous to the acetous may take place

* Calor lecti, equitatio, et Elixir vitrioli nauseam hesterni Iacchi abigunt. Home Princip: Medicin: Sect: II. 5.

See Heberden Comment: Cap. 52. p. 230.

Again, Potus acidi, non semper nocent ægris acore ventriculi laborantibus, nonnunquam etiam auxilio sunt. Heb. Comm. Cap. 97. p. 391.

Again, Acidum vitriolicum brevi ardorem ventriculi sanavit. Heb. Comm. Cap. 97. p. 392. et Id. Cap. 99. p. 405.

† Imo ex observatione anatomicâ constat acidum planè nullum in stomacho ritè se habente hospitari. Mayow, Tract. 4. p. 53. Ed: Oxon: 1674.

and give rise to the inconveniences here mentioned.

It is probable that the salutary effect observed from the use of the mineral acids in this disease of the stomach, may arise from this property of interrupting morbid fermentation.

The acid which I have given with success, is the nitric. This not only prevents the acid fermentation, but becomes, at the same time, a tonic to the stomach.

As the acid, in a stomach predisposed to generate it, is constantly forming, it is necessary that the remedy should be frequently applied: we may, therefore, direct five drops of the Nitric acid to be taken every four hours in cold water, by which the stomach will be kept constantly under its influence.

When once the habit of forming this abundance of acid has been checked, which will probably be the case by a short perseverance in this plan; we may gradually diminish the quantity of the nitric acid to

three, two, and at length to one drop every three or four hours.

During the whole of this course, as much magnesia vitriolata should be taken every morning, as will produce two evacuations.

The vegetable acid appears also to have the power of rendering inert the morbid acid of the stomach; as I have often known the juice of half a dozen lemons taken daily, prevent the return of this disease, which has reappeared upon this remedy being omitted.

We come now to the organic diseases of the Stomach; such as stricture of the Cardia,* and of the Pylorus, schirrous Tumours, and Cancer of the Stomach.

A stricture of the Cardia may be distinguished from all other diseases of the

* See Simson de Re medicâ, p. 146—for a curious method of ascertaining a disease of the Cardia.

Stomach, or of the neighbouring parts, by the production of pain on any attempt to swallow solid food.

This pain has something peculiar in its nature, and is described by the patient, as very different from what is generally understood by the word pain. It is a sort of tensive circumscribed sensation about the pit of the Stomach, striking through to the back, producing a feeling of incipient suffocation. This continues till the food is rejected, which is done by an effort very unlike vomiting. It seems to approach nearer to that effort which occasions hiccup. After this rejection of the food, the patient obtains relief. The body becomes very much emaciated, often to such a degree, that a tumour surrounding the Cardia may be discovered by a minute investigation in the region of the Stomach.

A stricture of the Pylorus may be distinguished from stricture of the Cardia, by the food readily passing into the Stomach without occasioning pain; and when

it is thrown up, it is by vomiting, not by the peculiar effort as before described in stricture of the Cardia. It is more difficult to distinguish it from that state of Stomach which often attends chlorotic women, which is without any diseased structure. But an attentive inquiry into *the first appearance* of disease in the Stomach, will scarcely fail to enable us to decide with truth.

If the constitutional disease preceded the sensations at the Stomach, we may securely pronounce, that the Stomach is merely sympathizing with the constitution: for if it were otherwise, the stomach derangement would have been first observed, and, indeed, would have continued a long time before any material influence was exerted by it on the constitution.*

* I have been often surprised to find very extensive mischief in the structure of the Stomach, without the constitution being sensibly affected by it; that is, provided the mischief was so situated as not to interrupt the passage of the food.

I have seen a large Schirrus in the Stomach, near the Pylorus, with an open cancer in one part of it, which had

After the stricture of the Pylorus has continued some time, the body generally becomes much emaciated, when the tumour can be discovered by examination on the abdomen.

I know of no symptom which can ascertain a Schirrus of the stomach.

When the Schirrus has ulcerated, and formed what is called open Cancer, there is generally an eructation of very fœtid air, and also a vomiting of a dark coloured mucus, which is very offensive. The pain is constant, though varying in degree: it is increased by taking any acrid, or acid

made its way through the stomach, and through the left lobe of the Liver; and an adhesion had taken place between the sides of the abscess and the peritonæum: so that, had not the patient been taken off by a disease in the Aorta, I have no doubt but that this abscess would have made its way out, through the integuments of the abdomen. Still, however, though this must have been a disease of very long standing, the body was but little emaciated, and the patient had never shewn any one symptom, by which such a disease of the Stomach could possibly have been suspected. This single case is sufficient to point out the infinite difficulty there is to determine the nature of internal diseases. See a similar case in De Haen, Vol. iv. p. 182.

substance into the Stomach, whereas mild fluids,* such as milk, gruel, &c. occasion little or no uneasiness; and this circumstance might help to distinguish it from that pain, which is occasioned by mere distension, for there the pain equally follows, whatever is the food taken.

For all these four states of diseased Stomach, which, though separately described, may be considered intrinsically the same, I have no plan of treatment on which I can with confidence rely. The most probable, and that which I have seen most to assuage the pains of the patient, has been a milk diet, and small doses of Calomel and Cicuta, as under:

℞ Calomelanos gr. j.
Succ. spissat. Cicutæ gr. xvj.
Contunde simul et fiant pilulæ quatuor, e quibus sumat unam sextâ quâque horâ.

But I must not conceal that a temporary

* See a case related by Dr. Johnstone. Med. Obser. and Inquiries, Vol. 2. p. 111. in confirmation of this.

relief is all that can be expected under complaints so deplorable.

In addition to the diseases of the Stomach, which have been here enumerated, I should add a continued state of vomiting, unattended by pain, without any appearance of Hernia, or any symptoms which would indicate original affection of the Brain.

This is a disease, which attacks those who are advanced in life. The efforts to vomit are very violent, and almost incessant: The Patient rejects every thing the moment it enters the Stomach, whether it be food or medicine. The Pulse is frequent and small. This vomiting will continue, in spite of all the measures to restrain it, for many days; when, what is thrown up becomes of a very dark brown colour, cold sweats arise, and at length the patient is cut off.

In this disease the Prognostic is unfavourable. The best medicines are small doses of magnesia vitriolata, with or without Tinct. Opii: or, the effervescing saline draught, with five drops of Tinct. Opii; and also opiate injections. A blister applied to the region of the stomach, has in several instances seemed to afford relief.

The diet should be bread and milk, in very small quantities at a time. Sometimes hot wine will quiet the Stomach; sometimes brandy, undiluted: but more frequently whatever is taken down, and in however small quantity, the efforts to vomit are instantly renewed.

In this extremity, I have more than once seen the patient restored by a total abstinence from every thing (whether food or medicine) for six or eight hours: By this respite the Stomach has regained its powers, and been able to bear without vomiting, very small quantities of bread and milk.*

* See a case related by Dr. Hunter, of the great advantages derived from administering small quantities of milk, in a disease of the Stomach. Med. Obs. and Inquiries, Vol. 6. p. 310.

This quantity should not exceed a table spoonful every half hour; and when this is retained without difficulty, it may be gradually increased.

If, on the contrary, it is again rejected, we must again recommend a further abstinence for an equal time, and that the bread and milk should be diminished to half the former quantity. In the mean time, injections of warm milk may be thrown up, with the addition of ten drops of Tinct. Opii every four hours, as a support for the system.

Hæmorrhage from the Stomach (Hæmatemesis) is not an idiopathic disease of the Stomach, but depends commonly upon an organic derangement of some of the viscera of the abdomen, more particularly of the Liver.

It sometimes also, takes place in females, when the menses are suppressed: and here the hæmorrhage returns at stated periods.

It may be distinguished from Hæmoptysis, by the blood being thrown off by vomiting, and not by coughing.

In women, whose menses flow at the regular periods and in due quantity, and in men, the Prognostic is unfavourable. But in chlorotic females the Prognostic is favourable. In the treatment, we must investigate minutely the cause of the hæmorrhage, and if it be discovered to arise from a disease of any of the abdominal viscera, we must adopt the measures appropriate to such a disorder: But if it takes place in consequence of suppressed menstruation, we may take away about six ounces of blood from the arm, a day or two previous to the period at which the hæmorrhage would have returned. We should also direct small doses of neutral salts to be taken every eight hours in a weak infusion of some astringent bitter.

By a perseverance in this plan, the patient will probably be gradually restored to health.

CHAPTER VIII.

The Intestines.

I COME now to some of the diseases of the whole tract of the Intestines, such as Cholera Morbus, Dysentery, Diarrhœa, Colica Pictonum, and that disease which is common among children, and termed Febris Infantum remittens; for this fever seems to depend entirely upon a disordered state of the intestinal canal.

a. *Cholera Morbus.*

The Cholera morbus is often very sudden in its attack, and differs in no particular from any common or ordinary Diarrhœa, attended with sickness, for the first six or eight hours:* after this time, the

* Aretæus, Περὶ αἰτ: καὶ σημειων Θξεων Παθων, Βιβλ. Β. Κεφ. ἑ. In his description of the first symptoms of Cholera, says, 'Τα πρῶτα μέρα, ῥηϊδίως "ΑΠΟΝΟΣ."

patient discharges, by vomiting, pure bile, which also passes off by stool, in great quantities. This is attended with severe griping pains in the bowels, and cramps in the muscles of the legs. The Pulse is small and very frequent, and often in a few hours the patient is brought into a state of considerable danger.*

It may be distinguished from Dysentery and Diarrhœa, by the matter which is discharged being pure bile, unmixed with blood or mucus, and without any (or scarce any) admixture of fæces.

It may be distinguished from Colica Pictonum by the bilious evacuations: for in Colica Pictonum, although there is sometimes a considerable quantity of bilious matter thrown off by vomiting, yet the bowels remain obstinately costive.

The Prognostic in this country is favourable. As the danger from this disease does not seem to depend so much upon the

* Sydenhamus, Sect. IV. Cap. II.

quantity of bile secreted by the Liver, (which must be considered the primary complaint) as upon the disorder which is produced by it upon the Stomach and Intestines: so, in the treatment, the primary disease may be partly disregarded, and its consequent effects be more particularly held in consideration.

For this reason, in the first place, the patient should be exhorted to drink plentifully of weak animal broth, by which the bile will be so diluted, as to be less irritating to the intestines: and in order to carry off the bile as soon as possible, and thus prevent a continued application of it to the coats of the bowels, the following draught may be directed:

℞ Magnes: vitriolat. ʒj.
Infus. Rosæ ℥j.
Syrup. Mori ʒss.
Tinct. Opii gtt. iij. vel gtt. v.
M. ft. Haust. quartâ quâque horâ sumendus.

The severe griping pains, and the cramps

of the extremities will be materially relieved by the use of the warm bath, or by fomentations to the abdomen.

b. *Dysentery.*

The Dysentery generally commences with all the appearances of simple purging, attended with occasional griping pain, and a discharge of fæces and mucus. The fæces are soon passed in small lumps, called Scybala, which are often covered with blood and mucus.

In a day or two there comes on a shivering: the pain in the abdomen is more constant, and there is a very frequent desire to evacuate the bowels; for the patient, in this disorder, perpetually complains of a load in the intestines, with which he is oppressed.

This supposed load he endeavours to throw off by violent efforts of straining, which, though he finds them to be ineffectual, he is unable to resist. Whatever is

expelled by these efforts is small in quantity, and consists of mucus, with or without blood,* which has not the smell of ordinary fæces, and the pain is not in the smallest degree relieved by the discharge.

The Pulse is very frequent. The tongue dry, and often red and polished. There is seldom any vomiting.

It may be distinguished from every other disorder of the Intestines by the discharge consisting of mucus and blood—by the pain not being relieved by such excretions —by the tenesmus—and by the fever.

The Prognostic should be guarded; for it not only often occasions great danger in its acute or first stage, but by long continuance, such a degree of mischief is caused in the large intestines, that the patient,

* Mucosis dejectionibus intertexuntur sanguinis quædam lineamenta: quandoque tamen ne minimum quidem sanguinis per omnem morbi decursum iisdem admiscetur: quo non obstante, (modo frequentes sint dejectiones, cum ventris terminibus, et colluvie mucosâ) morbus haud minus recte Dysenteria vocabitur quam si unà manaret sanguis. Sydenham, Sect. IV. Cap. III.

though he may in part recover his health from the acute form, will yet incur the chronic state of the disease, and after a few years suffering under the evils of a shattered constitution, he will at length be carried off by an incessant discharge of purulent matter from the rectum.

The cause of this kind of discharge is discovered after death to have been innumerable ulcerations, situated along an extended portion of the large intestines.

The Dysentery is said, in hot climates and in camps, to be an infectious disorder, but in this country I have never had proof of its infectious nature. Indeed, as I have often seen *one only* of a large family afflicted with the disease, and also, as I have had single patients in the Hospital, who have not in the smallest degree appeared to infect any other inhabitant of the same ward, my experience ought to lead me to the opposite conclusion.

In the treatment it is necessary to attend to the degree of *constant* pain, as well

as to the nature of the discharge per anum.

If the pain is very constant and violent, it will be advisable to take away ten ounces of blood from the arm. With respect to the exhibition of purgatives, I must call the attention of the reader to what I have before stated, namely, that the patient perpetually complains of a load in the bowels, of which he endeavours, by the most violent efforts, to be free.

Now, unless this sensation is removed, by removing the cause, that is, by the completest evacuation of the Scybala, the purgatives applied have not performed their due office.

The use, therefore, of the purgatives must be directed to this point, and an appeal frequently made to the feelings of the patient. When he acknowledges himself, that the load, of which he complains, has really been thrown off by a full and copious evacuation ; then, and not till then, should the

Practitioner desist from the free and full use of his evacuants.

When the Scybala are removed, the great point in the treatment will have been effected: still, however, the glands of the large intestines, which have supplied the mucus and blood, will remain in a state of inflammation. To dissolve this affection, the use of the purgatives should still be continued, but in a more moderate and limited proportion.

In this disease, it is necessary that we should be decided in our practice, as imperfect evacuations will tend only to weaken the strength of the patient, without removing his disorder. The importance of this decided practice will be still more apparent, when we consider that the chronic form of the disease probably arises, in many cases, from an imperfect removal of the offending matter in the acute form.

Having given a criterion respecting the mode in which Purgatives should be applied,

the quantity of which must be determined by the effect produced, it is only necessary to state that the most proper of them for this disease are Castor Oil, the oily draught before mentioned, or the neutral salts, in due doses every six hours.

A pill of five grains of Calomel may likewise be given every three or four days, as the patient may express his sensation of fulness in the bowels. The Calomel is directed, because the colon is usually much contracted, and milder purgatives would not exert sufficient powers to dislodge the hardened fæces which are there retained.

The venæsection should not be repeated, but with the greatest caution.

When the griping pain has in some degree subsided, I have frequently observed the greatest relief from tenesmus procured by small doses of Balsamum Copaivæ, as follows,

℞ Balsam : Copaiv. gtt. xij.
Vitel : ov. q. s.
Aq. Cinnamon. ℥iss.
Sacch : alb. ℈ij.
M. ft. Haustus quartâ (vel sextâ) quâque horâ sumendus.

Injections also of the same Balsam will very often tend to remove the tenesmus,

℞ Mucilag. Amyli. ℥iv.
Balsam. Copaiv. gtt. xl.
M. ft. Enema octavâ quâque horâ injiciendum.

If it should happen that the Practitioner is consulted after this disease has continued some time, and has now put on the form of chronic Diarrhœa, with the excretion of mucus and blood, attended with occasional griping pain and tenesmus; and if, moreover, the discharge should be unusually offensive and curdled, there will be reason to suspect that ulceration has taken place in the large intestines. Here too the same dose of Balsam of Copaiva may be recommended, and injections of it as before mentioned.

As there is usually, when the complaint arrives at this stage, a very great degree of debility, the following draught may be used with advantage.

℞ Balsam: Copaiv. gtt. x.
Vitel: ov. q. s.
Decoct. Cinchonæ ℥iss.
Tinct. Cinchon. comp. ʒj.
M. ft. Haustus sextâ quâque horâ sumendus.

This state of the disease is attended with great danger.

c. *Diarrhœa.*

The Diarrhœa is a discharge of the contents of the bowels, attended by occasional griping pains, which pains are perfectly relieved by the evacuation, and there is no fever.

It may be distinguished from Cholera Morbus by the discharge not being bile, and also by there being no vomiting of bile.

It may be distinguished from Dysentery

by the discharge not consisting entirely of blood and mucus, by the pain being relieved by the evacuations, and by the absence of fever.

This disease is occasioned by an increased secretion from the glands of the intestines. Its cure, therefore, must be attempted by restraining this abundant discharge from the glands, by the adoption of astringent medicines.

It is usual to begin the treatment of Diarrhœa by a purgative medicine, but in simple Diarrhœa, I think, this not only occasions unnecessary loss of time, but (if what I have stated be the cause of Diarrhœa) a purgative will be rather hurtful than beneficial. The following draught will generally be found sufficient to restrain a Diarrhœa, which has not continued a great length of time,

℞ Mist. cretaceæ ℥iss.
Confect. aromat. ℈j.
Tinct. Cinnamom. ʒss.
Tinct. Opii gtt. iij.
M. ft. Haustus quartâ vel sextâ quâque horâ sumendus.

If the Diarrhœa has continued some time, a more powerful astringent may be necessary, such as the following Bolus,

℞ Kino pulv. ℈j.
Confect. opiat. gr. xij.
Misce, fiat Bolus ter quotidiè sumendus.

vel

℞ Aluminis gr. x.
Conserv. Rosæ q. s. ut fiat Bolus ter diè sumendus.

This is a disease devoid of danger.

As there is but little risque of these three diseases Cholera Morbus, Dysentery, and Diarrhœa being mistaken for each other, and still less of their being confounded with other complaints of the abdomen, I have been less prolix than in several of the more obscure disorders. I might also add, that as they have been so often, and so ably discussed by various authors, the same necessity for minute description did not appear to me to exist.

d. *Colica Pictonum.*

Colica Pictonum, a disease, of which but little mention is made by ancient authors, is proved to arise from the gradual absorption of Lead into the system:* and this would appear to produce the complaint equally, whether the lead be immediately introduced into the Stomach, or whether it be applied merely to the skin.

The complaint is known by a violent and constant pain about the navel, with a retraction of the integuments of the abdomen towards the spine, by an obstinate costiveness, and by a frequent but ineffectual desire to evacuate the contents of the bowels. There is sometimes, though not always, considerable retching.

This is a state of the complaint which will last for several days, during which time however, the pain will vary somewhat

* See Sir George Baker's Dissertations in the Medical Transactions. See also De Haen, Ratio medendi, Tom. I. Cap. 24. and Tom. III. Cap. 7.

in degree, though never entirely cease. A mild kind of delirium, nay a perfect mania, will sometimes take place, and continue the whole time the bowels are constipated: These however, are not very common circumstances, and when they do occur, they seem to have no influence in retarding the patient's recovery.

The position of body, by which the greatest relief from pain is experienced, is by keeping the trunk bent upon the knees. The Pulse is usually not more than a hundred in a minute. The Tongue has a natural appearance, and is moist.

The situation of the pain round the navel —the retraction of the belly—the costiveness—the Pulse—and the preference given to a bent position of the body, will distinguish this from every other disease of the abdomen. It will be proper, in all complaints of the Intestines, to make inquiries respecting the Patient's habits of life, and if these be discovered to subject him to the influence of Lead, the identity of the

disease is proved beyond the possibility of doubt.

The Treatment.

As this complaint would seem to consist principally of a spasmodic affection of the Colon, by which the fæces are locked up between its circular bands; the object in the treatment is to remove the fæces, by means the least irritating; and as, in this case, the costiveness depends upon spasm, Opium will act as a powerful purgative,* which may be united with castor oil, as in the following draught,

℞ Ol. Ricini ℥ss.
Vit. ov. q. s.
Tinct. Opii gtt. xxv.
Aq. Menth. Piperit. ℥iss.
M. ft. Haust. sextâ quâque horâ sumendus.

At the same time, glysters of warm water

* It has been observed by De Haen, that Paralysis does not succeed attacks of this colic so frequently, when the cure of it has been effected by Opium, as when the complaint has been removed by other means. See De Haen, Vol. III. p. 381.

with forty drops of Tinct. Opii should be administered, fomentations applied to the abdomen, or the warm bath should be recommended.

In case the Stomach will not bear the Castor Oil, a solution of Magnes. vitriol. in Aq. Menth. Pip. with Tinct. Opii will answer every purpose. Sometimes, however, liquids of every sort are rejected; we must then attempt to procure stools by pills of Calomel, Aloes, and Opium, as under,

℞ Calomelanos, gr. v.
Aloës socotrin:
Opii purificat, āā gr. j.
Contunde simul et ft. pilula quartâ quâque horâ sumenda.

When we have once procured evacuations, a great difficulty is overcome, and the patient will be gradually restored to health by the constant use of the oily draught, or by half an ounce of neutral salts every morning in broth containing a large proportion of fat.* He should also

* Fat and suet are recommended by De Haen as Prophylactics.

be enjoined to lay aside any clothes which may be impregnated with lead.

This is a stage of the disease devoid of danger; but after a person has suffered repeated attacks of this Colic, he not unfrequently falls into Epilepsy, or becomes paralytic in the hands.

When he becomes epileptic from the effects of Lead, there is nothing peculiar in the treatment, more than if the disease had arisen from any other cause; except, perhaps, that particular attention should be paid to the state of the bowels: but the paralytic affections of the hands demands a further consideration.

The joint at the wrist, in many cases of this Paralysis, becomes remarkably flaccid and loose, as if the weight of the hand had stretched the capsular ligament. There arises, frequently, a tumour on the back of the hand, which is commonly soft and moveable, though sometimes it is hard and perfectly fixed; the former is an enlargement of the sheaths and tendons of the

extensor muscles, the latter is an enlargement of the heads of the metacarpal bones: This appears to be the case from a dissection by De Haen; I have, myself, never had the opportunity of examining these tumours after death.

The adductor muscles of the thumb gradually waste away. This is supposed to arise from a more rapid absorption of the part taking place, in consequence of pressure from the handle of the brush used in painting; but the wasting being observed equally in each hand, would rather militate against such an opinion.

Although the absorption of Lead may, and does produce the general debility of the muscles, yet I had long thought, that besides the remedies appropriate to the removal of the original disease, some assistance of a mechanical nature might be applied likewise for the purpose of relieving the topical Paralysis, by placing the muscles in such a state, as that they might be again enabled to resume their lost action.

To give the reader the opportunity of judging how far this idea is well founded, I shall relate the following case somewhat at length.

On the thirteenth day of August 1800, a man was admitted an out-patient at Saint George's Hospital, who was a worker in copper, in which occupation he also frequently employed Lead.

He had experienced several attacks of severe Colic, which he conceived, and which were supposed by the professional men who attended him at the time, to have arisen from the effect of lead. He had now no Colic, but was perfectly paralytic in both wrists.

From the thirteenth of August to the tenth of November, he took tonics in various forms; stimulating liniments were applied to the arms, and also Electricity; but not the smallest amendment could be discovered in the paralytic affection.

Under the idea of its being now completely a local complaint, and that the

extensor muscles were under very disadvantageous circumstances to recover their power, by having the weight of the whole hand attached, and (as it were) suspended to the extremity of their tendons, I directed that a splint should be made somewhat in the form of a battledoor, which might be carried along and made fast under the fore-arm, to the extremities of the fingers. By these means the weight appended to the extremity of the muscles would be taken off, and thus they will be placed in a situation most favourable for the recovery of their powers. This splint I desired might be kept on night and day.

During this experiment, I gave the patient no medicine whatever, and that the trial might be as little as possible subject to error, I first had the splint applied to the right arm only.

In one month from the first application, I had the satisfaction to find, that the right hand was able to raise an eight ounce weight into a line with the fore-arm by the

power of the extensor muscles: whereas, at this time, the left hand remained as perfectly paralytic as before.

In five weeks more, the extensor muscles of the right hand appeared to have regained entirely their natural strength; but the left hand remained perfectly paralytic.

In order to ascertain how far this improvement could be conceived to have arisen from any change in the constitution, and not from the local means here used, I discharged the patient from the hospital for one month, at the end of which time he returned with the left hand still perfectly paralytic, but the right hand enjoying its full and natural powers.

The splint was now applied to the left hand, and in seven weeks the power of the extensor muscles of that hand also was perfectly restored.

This is a case, which carries with it the strongest conviction of the efficacy of the plan; and from several other cases which

have fallen under my own care, as well as under that of some of my medical friends, to whom I had communicated this method, I have no hesitation in recommending it to practitioners, as a treatment, if not infallible, certainly generally successful in removing that disease, which has hitherto been deemed almost incurable.

From the success which attended this treatment for the first two years, I almost flattered myself, that there would have been no need for qualifying my fullest expectations of constant success, to be derived from this method: but I have had in Saint George's Hospital a patient, who has worn the splints four months, apparently without the smallest benefit.*

As I conceive the success of the treatment depends not only upon the constant use of the splints, but also upon the manner,

* I have just been informed, that the patient here mentioned, persevered in the use of the splints for three months or more after he was discharged from the hospital, and that he gradually recovered the use of his hands.

in which they are applied; I have subjoined a Plate, which will convey my meaning better than it is possible to do by description.

Fig. 1. The Paralytic hand and arm of a Painter.

Fig. 2. The same arm, with the splint fitted to it.

Fig. 3. The Splint.

In order that these experiments should be perfectly satisfactory in establishing the beneficial effects of this new method, I have never applied the mechanical relief, and the constitutional remedies for the disorder at the same time: the latter were always used before I resorted to this plan, and then every thing was omitted but the mechanical application.

Now, however, as my object of ascertaining this fact is obtained, I shall for the future, in obstinate cases, combine this method of cure with any other means, topical or constitutional, which I may deem serviceable to the local complaint, the

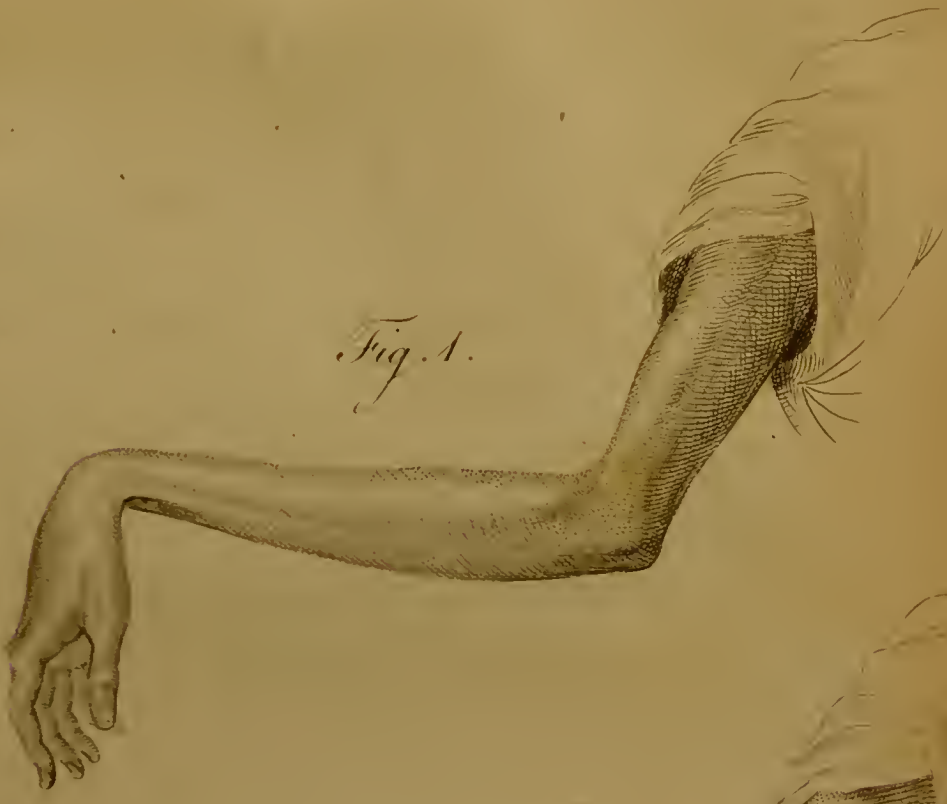

Fig. 1.

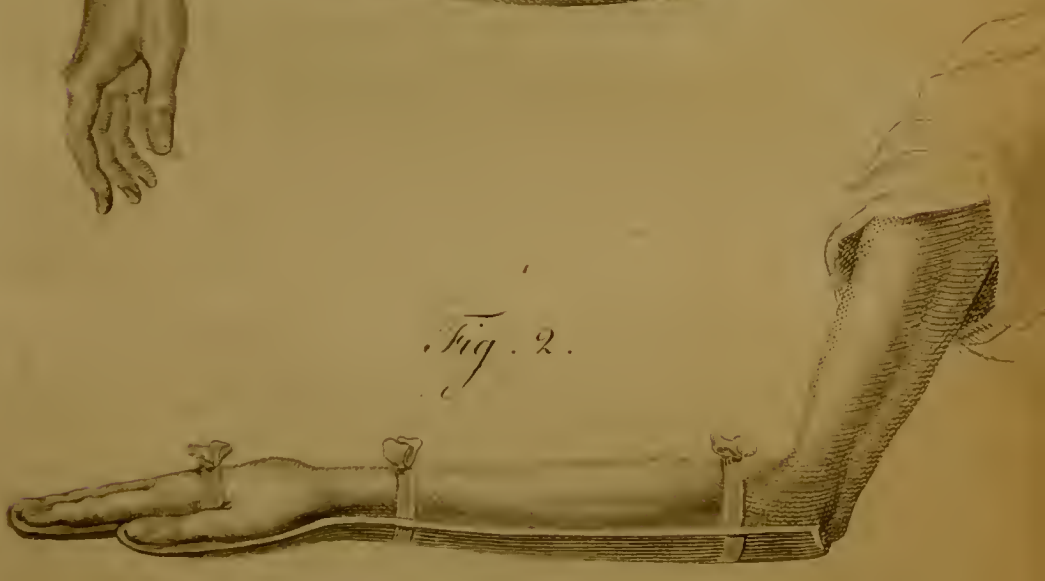

Fig. 2.

Fig. 3.

original disease, or the general state of the health.

As I found successful this mechanical method of relief for Paralysis of the hands, when derived from the effects of Lead, I was induced to adopt the same method in other cases of Paralysis of the hands, which seemed to have arisen merely from a mechanical cause, and independent, as far as I could discover, of any absorption of Lead. I was, however, disappointed in finding, that the mechanical application afforded them no relief.

I have seen one case of a chairman who had the paralytic affections of the hands in no way to be distinguished from that paralysis amongst painters: but I could not discover, on the minutest inquiry, that he had been exposed to Lead. He was accustomed to carry very heavy weights under-handed upon what is called, "a horse."

I have also seen a patient, in the same way paralytic, whose business was to string Piano-fortes, which operation required a

very considerable exertion of the adductor muscles. Is this a case of Paralysis purely mechanical? or could the metallic wires have any effect in producing it?*

I think it necessary to add, that these two were both out-Patients; and therefore I am unable to determine, whether the remedy was applied with that strictness and constancy, which are necessary for effecting a cure.

e. *Febris infantum remittens.*

† This disease will appear, from its title, rather improperly placed amongst the complaints which are peculiar to the intestinal canal; but as I conceive that the fever is merely symptomatic of the derangement of the intestines, the impropriety will attach

* Since writing the above, I have discovered that this man has a caries of the bodies of the cervical vertebræ: this will account as well for the paralysis of the hands, as for the failure of the splints in removing it.

† See an excellent Treatise on this Disease, by William Butter, M. D. London. 1782.

more to the name of the disease, than to my arrangement of it.

This is a complaint confined to children, from the age of one year to ten or twelve. It makes its advances very gradually, manifesting itself by irregularity in the bowels, which are more frequently too costive, though sometimes, too much relaxed.

In the course of each day there are several slight accessions of fever, during which the patient is drowsy: in the intervals of these paroxysms, he appears perfectly well, though at all times, somewhat more peevish than is natural to him. The appetite is variable. The Pulse is upwards of an hundred, often an hundred and thirty in a minute. The Tongue has a natural appearance.

Such are the symptoms which will manifest themselves, more or less, for eight or ten days, when all at once, a more violent paroxysm of fever will arise, preceded by a severe shivering fit, and by vomiting. The Pulse becomes very frequent, an hundred

and forty in a minute, the drowsiness is much increased, the cheeks are flushed, but there is not the least pain complained of in any part, except now and then slight pains shooting through the abdomen.

I should also mention a symptom, which almost invariably attends the complaint, namely, an incessant picking of the skin of the nose and lips, and of the angles of the eyes.

Digestion seems perfectly at a stand, for the food, which is taken into the Stomach, will often be brought up unaltered, though it shall have remained down a considerable time. The intestines also seem to be in a manner paralyzed: They exert no action on the food; for it passes off like a mass of putrid vegetable and animal matter, which had been sometime subjected to heat and moisture, without its having the smallest resemblance, either in appearance or smell, to those fæces, where the powers of digestion have been exerted.

When the disease has continued some

time, the appetite is so totally destroyed, that for six or eight days together, I have known the whole nourishment consist of about half a pint of toast and water in the twenty-four hours.

There is often delirium, and that too continued for two, or even three days successively, when the patient will awaken from it, as from a dream, appearing perfectly unconscious of what has passed. The duration of the disease will not be lengthened by either of these circumstances.

The resemblance in this description to the symptoms, which denote Hydrocephalus internus, is particularly striking: I think however, that the following circumstances will distinguish the two complaints from each other.

In Hydrocephalus internus, there are occasional screamings in the sleep, with a continual tossing of the hands above the head, and an intolerance of light, with more or less of strabismus; but, I think I may say, that in the complaint before us, there

is hardly ever what can be called screaming, and there is certainly never intolerance of light, or strabismus: and, moreover, though the hands are often carried to the face, it seems to be more from an inclination to pick the skin from the lips, eyes, and nose, than occasioned by the painful restlessness, which attends the Hydrocephalus internus.

In the Delirium of Hydrocephalus internus, the faculties are totally destroyed, and the muttering ravings of the patient are without sense or reason, and from this state he cannot be roused, so as to command his attention to any object even for the shortest period. But in the other species of Delirium, the child, during this state, can at any time be recalled to his senses, which he will retain for a few minutes, acting and talking consistently.

We should likewise attend to the excretions from the bowels, which, in this fever, are in a remarkable way changed from the natural appearance. I have often seen

them perfectly black, and smelling like putrid mud :* They are sometimes curdled, with shreds of coagulable lymph floating in a dark greenish-coloured fluid. These appearances of the fæces are not observed in Hydrocephalus internus.

In very young children, the irritation on the intestines will be so great as to produce convulsions, which will tend still more to confound the two diseases; and during the fit, it is totally impossible to determine whether the source of the convulsion be in the Head, or in the Intestines; but when the fit is over, if the faculties are perfectly restored, and the history of the previous illness accords with the symptoms above described, we may securely pronounce that the head is not the source of the convulsion, but that it is merely a symptom of the disordered intestines.

* Aretæus, in Dyspepsia, observes of the food, which has been eaten, "λευκη μεν γαρ και ἄχολος ἡ χροιη, κακοδμα δὲ και "ΒΟΡΒΟΡΩΔΕΑ, &c." Χρωνιων Παθων Βιβλ. Β. Κεφ. ζ'.

The Treatment.

As this disease depends upon irritation on the intestines, and partly perhaps upon the absorption of their putrid contents, the objects are to clear the bowels by purgatives, and to restore the tone of the stomach and intestines by some slight tonic in union with Opium or not, as the irritation on the bowels may appear more or less violent.

It is difficult to give any direction as to the quantity of the purgative, for such is the torpor of the intestines, that what on other occasions would be considered a very full dose, in this complaint will have no effect whatever.

I have often been surprised at the great quantity of powerful purgatives, which have been ineffectually administered to children during this fever. A child of three years old has taken twelve grains of the Pulvis è Scammonio cum Calomelane, in union with as many grains of Extractum Jalapii, with-

out producing more than one evacuation. I have heard of even much larger doses than this being given with no greater effect. The regulation therefore, of the quantity of the purgative, must be left to the judgment of the practitioner.

I wish however, to give a caution respecting the degree of purging, which I think ought never to be carried to a great length, as the intention is merely to remove the contents of the bowels, and not to produce any great discharge from their glands. If we do not attend to this circumstance, the intestines will become distended with air, and the patient may run the risque of being destroyed with every symptom of Tympanitis.*

* Ne tamen Cerevisia primùm affusa, Rhei vi catharticâ saturatius imprægnatâ, *justo vehementius alvum cieat*, cautius agimus, si, &c. Sydenham, p. 536. Ed. Lugd. Bat. 1726.

And also, a similar caution respecting the purging of children. Dissertatio epistolaris ad Guliel: Cole, M. D. p. 406. Ed: Lugd: Batav: 1726.

And again, p. 536. "Hoc sedulò observandum est, quod in hoc febris genere (in febre, nempe hecticâ Infantium) si dictis evacuationibus pertinaciter insistamus, usque dum symptomata omnia prorsùs ablegaverimus, sæpiùs ægro non nisi morte medebimur."

When the bowels have been once rendered soluble, they may be continued in that state by a small quantity of neutral salt every morning, as long as the fæces wear an unnatural appearance; and twice or three times a day the following draught may be given,

℞ Cort. Cascarillæ ʒij.
Canell. alb. ʒj.
Aq. bullient: ℥viij.
Stent per horas duas, et cola.
℞ Colaturæ ℥j.
Spt. Lavend. comp. gtt. xij.
Tinct. Op. gtt. j. vel ij.
Syrup. Cort. aurant. ʒss. M. ft. Haust.

The Prognostic in this disease is favourable. The most favourable symptoms are a return of appetite, and the intervals between the accessions of fever becoming longer. The most unfavourable are the accessions of fever being more frequent, or almost incessant, and the abdomen becoming enlarged.

I have been present at the examination of a child of four years old, who died of

this complaint. The belly was swelled to a very large size, but there was not the least appearance of inflammation on the Peritonæum, or upon any of the viscera of the abdomen, or any fluid in the cavity. The liver, pancreas, spleen, and kidneys, were natural; the mesenteric glands were in a small degree enlarged: The intestines were distended to an enormous size, so that the colon measured seven inches in circumference, and all the other intestines were, in like manner, greatly distended.

CHAPTER IX.*

Enteritis,

or

Inflammation of the Intestines.

THE inflammation of the Peritonæal coat of the intestines may be considered as having been partly discussed in the chapter on Peritonitis; for in whatever part of the Peritonæum the inflammation is situated, the disease and the treatment are the same.

There is however, more danger to be apprehended, when the Peritonæal coat of an intestine is inflamed, than when the inflammation is seated on that part of the Peritonæum which lines the cavity of the abdomen. The disease is not only more dangerous, but the danger advances more

* I am obliged to Dr. Mayo for many of the observations contained in this Chapter.

rapidly. In Peritonitis, a person may live six, seven, or eight days; but in Inflammation of the Intestines, he may be destroyed in three or four.

The pain is extremely acute and continued, and much increased by pressure. The Pulse is very frequent, often a hundred and twenty or thirty in a minute, small and hard. The tongue is dry and white. The respiration quickened, and the greatest look of anxiety is in the countenance.* There is a continual tossing of the arms, but the patient endeavours to keep the trunk of the body at rest. Nausea and vomiting take place, especially when the inflammation is seated in the small intestines, and the bowels are constipated.

I should observe, that the inflammation will often extend to the muscular coat of the intestines and throw them into violent contractions, by which the pain will be much

* See Morgagni de Causis et Sedibus Morb. Epist. xxxv. Art. 21.

increased; or, by which the pain may be said *to vary*.* This variation of the pain might lead us to confound Inflammation of the Intestines with Colic; but in colic, the pain becomes acute from a state of absolute ease, and subsides again to the same state, or nearly so: whereas in Inflammation of the intestines the pain varies from a state already very acute to a state still more acute, and never subsides into absolute ease, or into a state approaching to it.

The frequency therefore of the Pulse, the nature of the pain as above described, the endeavour to preserve a quiescent state of the trunk of the body, and the look of the countenance will distinguish this disorder from Colic; in which, the pulse is but little affected, the pain renewed at intervals, a preference is usually given to a bent position of body, and the countenance does not betray either alarm or anxiety.

* Subinde remittitur dolor, mox recrudescit paroxysmus quem æger præsentiens, vultu miserabili atque ejulatu, ceu præsentem exhorret et aversatur. Sydenhamus, Sect. IV Cap. VII.

The symptoms, as above related, mark the more common approach and progress of Enteritis: but as the attack is not in all instances so distinctly evident, I am inclined to treat more at large upon the subject; especially as it is a matter of the greatest importance to detect the complaint within the first twenty-four hours from its commencement.

Enteritis in some cases proceeds for a day, or even for two days, without exciting uneasiness sufficient to alarm the patient; leading him to imagine, that all his unusual sensations are merely the effect of costiveness. In other cases again, a considerable fever sets in, as soon as, or very little after, the first painful sensations of the belly are perceived.

Sometimes the complaint commences with all the symptoms of a severe Kidney affection, and the pain across the loins will absorb all other sense of uneasiness, and may mislead the patient's and practitioner's attention from the bowels: but to this

sensation soon succeeds a pain across the abdomen, which is generally most severe about the head of the Cœcum, shooting from that spot towards the Pubes, and also occupying a considerable portion of the right flank. The pain is sometimes, however, confined to the navel, and just above it.

After these symptoms have continued a few hours, sickness is apt to come on, which only relieves for the moment, and is then followed by a most distressing nausea.

Chills now frequently succeed each other; but we may remark that there is seldom any distinct rigor. The bowels are obstinately costive, what is injected is returned unaltered, and what passes from the rectum unsolicited, is devoid of the ordinary smell and colour of fæces.

The Pulse is quick and hard ;* the tongue

* The Pulse, for the three first days, has, in one or two instances, appeared soft and full, and has beat less than an hundred in a minute: but this is a very uncommon circumstance.

is dry and white, with a streak of brown fur down the middle of it. The thirst is excessive. The slumbers are short and interrupted by continual startings. The abdomen becomes enlarged, and often tense, and the slightest pressure upon it aggravates the pain.

This is the state and progress of the symptoms during the first, second, and third days: about the fourth day, the means applied will generally produce a liquid stool, which has a more natural smell and colour, giving an assurance that a continuance of the purgatives will secure a continuance of such evacuations. This, however, is not always the case, for very commonly on the fifth day there re-appears all the signs of fresh obstruction. The stools, if any pass, are green and watery; and the patient relapses into that general uneasiness and fever, which he experienced on the third day.

In this manner the disease proceeds to the eighth or ninth day; the belly, how-

ever, in the mean time becomes more enlarged, and the patient is continually harassed with sickness: when he is left to himself he falls into a muttering delirium. His Pulse is more frequent, and smaller; and his Tongue is covered with a browner fur. There is a constant urging to stool, by which, however, a mere watery dejection is produced.

About twenty four hours after the Delirium has commenced, there arises an extreme restlessness and anxiety, to which will soon succeed convulsive twitchings, laboured respiration, and death.

In cases of more fortunate issue, about the sixth or seventh day, the stools will pass off, natural in their colour and smell. The patient will wear a more cheerful countenance, and become less restless. He will now have intervals of ease, and will complain more of the real gripes, than of his former pain. The right and lower part of the belly will admit of freer pressure. Sleep of a refreshing nature

follows, and a complete recovery is now to be expected, by persevering in the usual means of keeping the bowels in action.

The Treatment.

As soon as the disease is ascertained to be Enteritis, blood should be taken largely as well from the arm, as locally. Sixteen ounces may be taken from the arm; or the same quantity may be taken by cupping glasses applied to the whole abdomen, but more particularly to that part of it, which is opposite to the Cœcum.

If the Stomach will bear liquids of any sort, a strong solution of Magnes: vitriolat: in Julep: Menthæ, with an addition of the Tincture of Senna, may be directed in such quantities, and at such intervals as the sickness at the Stomach will allow. If, however, all liquids are rejected, we may direct an usual dose of Calomel, in union with the Extract: Colocynth: comp: every six hours

ad quartam vicem. In the intermediate hours, an injection of water gruel with common salt may be employed.

If it should happen that the patient obtains no relief from these measures in eighteen hours, it will be proper to take the like quantity of blood from the arm, or (in case the strength of the patient should seem much exhausted) by cupping glasses, or by twenty or thirty leeches applied to the abdomen, and the bleeding may be encouraged by warm fomentations.

The purgatives are to be continued during the whole progress of the disease. We are to vary them as they may seem to sit most confortably on the stomach of the patient.

When the disease runs on to the sixth, seventh, or eighth day, without any abatement of the symptoms, which it will do sometimes, although the most prompt and active measures have been taken, the greatest advantage is often experienced from throwing up per anum, the smoke of

Tobacco; or, in lieu of this, an injection of Tobacco, as the following,

℞ Folior: Nicotianæ ʒij.
Aq. ferventis ℥x.
Stent per semihoram, et cola.
℞ Colaturæ Lbss.
Extract: Colocynth: comp: ʒss.
Misce, ft. Enema.

This injection may be repeated every six or eight hours.

The only objection to the use of Tobacco in either form, is its increasing, in some cases, the nausea; and almost in all, its occasioning a painful tenderness in the rectum; but the important benefit which it frequently produces, will not allow us to regard these trifling inconveniences.

It may be right to observe, that although in many cases of Enteritis, repeated bleedings from the System are highly beneficial, yet instances may occur, where the general strength of the patient will scarcely admit of our having so frequent a recourse to this mode of taking blood, as the urgency of

the symptoms require. We are, therefore, compelled to rely upon taking the blood by means of cupping glasses, or by leeches.

If there is reason to suspect from the violence of the symptoms at the onset, and from its resistance to our first endeavours that we shall stand in need of further cupping, the application of blisters should be deferred. Indeed, it would seem as if it was more advisable at all times to wait till some impression has been made by the bleedings, before we have recourse to blisters. After this, however, much benefit arises from repeated blisters applied to various parts of the abdomen.

During the whole course of the disease, all animal broths, or fermented liquors, should be interdicted. The diet should consist solely of gruel, milk and water, with mint or common tea.

Male and female are equally subject to Enteritis, from early age to about fifty years. It is met with at all seasons of the

year, but it is more common in the autumnal part of the summer.

Enteritis is a disease attended with the greatest danger. It will sometimes destroy the patient the third day, but this is not a frequent occurrence. When it does commence with such violence, and run with such rapidity, I fear no art can restrain its course. Our principal means of checking its progress, must rest on the largeness and frequency of the bleedings.

The disease is apt to recur after a short interval from the previous recovery, by exposure to cold and wet, particularly when they are applied to the feet; the patient should therefore, be cautioned against such imprudence.

In several instances the complaint has returned the following autumn, with only this difference of feature, that it did not assume so violent a character in its commencement, as it did at the first attack.

Though the pain at this second attack is

confined to the same spot on the abdomen, as at the previous attack of the disease; yet as if the same part, inflamed afresh, was less irritable, it is not so tender on pressure; neither is the constitutional affection so strongly marked by fever and general derangement. The complaint, however, is no less dangerous.

CHAPTER X.

Inflammation of the Mucous Membrane of the Intestines.

In this disease there is pain confined to some one part of the abdomen. The pain is constant though not acute, and varying very little in degree. A slight pressure on the part will not increase the pain, as in the inflammation of the peritonæal coat of the intestines: neither will there arise any (or scarce any) tension of the abdomen, although the pain shall continue a considerable time. The Pulse is about one hundred and twelve in a minute. The bowels are usually costive.

These two latter circumstances will serve to distinguish this disease from peritonæal inflammation: and this is particularly necessary to observe, because the Treatment will be different, and I may add, the danger will be less.

It is not always necessary to bleed in this complaint: however, if the Pulse is full and strong, it will be proper to take twelve ounces of blood from the arm. The bowels should be kept open in the mildest way, either by small doses of castor oil, or by the oily draught already so often recommended.

The diet should be boiled bread and milk, or gruel. All animal broths and fermented liquors should be prohibited.

I would recommend, that a particular attention be paid to the evacuations; for by them the state of the internal membrane can be learnt, better than by any other means. This inflammation generally terminates by a throwing out of coagulable lymph, which may be discovered in the evacuations, resembling shreds of boiled macaroni.

When we observe these shreds in the evacuations, we may safely pronounce that the patient will soon recover: for the period of the greatest danger is during the high

inflammatory state of the membrane, and as this particular formation is a consequence of it, it is a proof that the period of danger is passed.

If the evacuations are particularly offensive, and appear curdled, with here and there specks of blood; and especially if these continue for any length of time, there will be good reason to apprehend, that the inflammation has terminated in ulceration.

The disease, in this state, is extremely dangerous; though a steady adherence to a milk diet will frequently restore the patient, when it is assisted by small doses of some astringent bitter, such as the Decoctum Cinchonæ, or a weak infusion of the Cortex Granatorum.

If the ulcerations are situated in the small intestines, the emaciation will be very rapid; much more so than when the ulceration is situated in the large.

When the ulceration appears to be low down in the rectum, an injection of the expressed juice of Carrots has not only, in

several instances, removed the offensive smell of the fæces, but seemed to give the ulcers a tendency to heal.

So little does disease in the large intestines, when it is unattended with pain, affect the bulk of the body, that I have seen after death, a Schirrus high up in the rectum, of three inches length, which had been increasing for many years, as could be ascertained by the gradual diminution of the volume of the fæces, till at length it entirely obliterated the cavity of the intestine. Yet, however, there was not the least emaciation, or serious inconvenience produced by it, until the passage of the fæces was completely obstructed.

CHAPTER XI.

Mesenteric Glands.

When there is disease of the Mesenteric Glands, the patient usually complains of a lancinating pain, deep-seated within the abdomen, which is of very short duration, and resembles more the common gripes, than it does that pain, which attends inflammation of internal parts.

The Abdomen gradually enlarges, while the other parts of the body become emaciated. The features and the whole look of the countenance are in a remarkable degree altered from their former appearance. The eye seems glassy, and sunk in the socket: the nose appears lengthened, from the falling in of the cheeks, which, unless when they are flushed with fever, are of a marbly whiteness; the same white-

ness likewise, is observable over the whole frame, in consequence of which the superficial veins become more distinctly evident.

The lips are somewhat inclined to swell, and they are often of a deep red colour. The angles of the mouth are beset with small ulcers, and sometimes the whole lip is divided by painful fissures.

The pains within the Abdomen often do not occur more frequently than three or four times in the day; they are not increased by pressure on the Abdomen, neither do they produce any inclination to pass fæces, or to vomit; or are they relieved when these evacuations occur.

The state of the bowels is variable, though they are more commonly relaxed than the reverse. When they are relaxed, the excretion consists chiefly of a frothy mucus tinged with bile, by which discharge an excoriation of the verge of the Anus is produced.

In the early stages of the complaint, the temper is not hurt. There is a disinclination

to use muscular exertion, though the energy of the mind seems in no way impaired.

In the more advanced stages, the Patient is fretful and peevish, the faculties become dull, and he is totally averse to use any exercise, of either mind or body. During the whole of the complaint, there is seldom any delirium: neither is the sleep much interrupted, during which however, profuse sweats appear upon the forehead and breast.

An accession of fever usually occurs towards the evening, and we may observe that it is not accompanied with any inclination to sleep, as is the case with every new paroxysm of fever in the infantile remitting fever. The Pulse in the evening is usually about one hundred and twenty, and at no time of the day is it less than an hundred in a minute.

The Tongue is variable, sometimes it is streaked with a white line down each side, but very often it has altogether a natural appearance, and there is but little thirst.

The skin of the whole body, but more particularly of the extremities, feels dry to the touch, and the cuticle is thrown off in scales.

It may be distinguished from Peritonitis, by there being but little pain perceived from pressure. In the same way also, it may be distinguished from Enteritis; to which we may add as a further distinction, that in this complaint there is little or no vomiting, and no difficulty in procuring evacuations with the ordinary quantity of purgative medicines.

It may be distinguished from the chronic inflammation of the Peritonæum by there being no superficial pricking pains—by the Peritonæum appearing equally distended with the skin of the Abdomen—by the regular evening accession of fever, and by the look of the countenance, such as I have described.

It may be distinguished from the febris infantum remittens by the accession of fever being attended with restlessness, rather

than inclination to sleep—by the excretions from the bowels not being particularly changed from their natural appearance—by the accession of fever only occurring in the evening, and by the duration of the complaint. Whereas in the remitting fever, the paroxysms of fever are attended with drowsiness, the evacuations are extremely unnatural both in colour and smell, the accessions of fever are very irregular, as well in their recurrence, as in their duration, and the disease has the character more of an acute, than of a chronic disorder.

This disease is met with from the age of six months to ten or twelve years. The earlier in life the attack appears, with the more danger is it attended; indeed at all ages the Prognostic should be guarded, and for the most part unfavourable. The change in the natural structure of the glands is so gradual, that scarce any pain is occasioned by it: In consequence of this, the complaint is frequently far advanced

before it becomes an object of medical attention.

The time requisite for such a derangement of structure to take place, as is sufficient to destroy the patient, is very uncertain. In some instances, four months have been found sufficient, in others, almost as many years. We may observe, that the more pain there is within the abdomen, the more speedy will be the progress of the complaint, and the greater dispatch and decision will be required in the treatment of it. As this circumstance of pain may rouse the attention of the patient, it may be regarded as a favourable occurrence rather than the reverse, for it will call forth the application of remedies, before the organic mischief has proceeded beyond the reach of medical aid.

The most favourable appearances are, an improvement in the colour and look of the countenance—the evening accession of fever being less severe, and its duration not so

long—the regaining of the bulk of the body, and the diminution of the size of the abdomen.

The most unfavourable symptoms are, the emaciation rapidly increasing—the evening accession of fever very severe, and continuing almost through the whole night—the cuticle peeling off, and becoming dry and harsh—and the abdomen more enlarged and tense.

The Treatment.

In the treatment of this disease, it is necessary that the most rigid attention be paid not only to the medical management, but also to the diatetic; and any plan which would seem to hold forth the probability of ultimate success, should commence at an early period of the complaint; before that is, the body is much emaciated, and before the evening accession of fever is severe and regular.

The Patient should be purged twice a

week with a pill of Calomel at night and a solution of neutral salts on the following morning, the quantity of which must be proportioned to the age and strength he possesses. On the intermediate days, some slight tonic may be directed every eight hours, in union with Cicuta, and if the bowels are constipated, a small quantity of a neutral salt may be also added.

I must however, here again repeat that we must be cautious in the exhibition of purgatives to children, for if we exceed in this respect, we shall exhaust the strength of the patient, and induce such a weakness in the muscular fibres of the intestines, that they will become greatly distended with air, and thus increase the swelling of the abdomen.

When we observe the paroxysms of fever to be less severe, we may increase the power of the tonic, and moreover direct (for a child of two years old) about half a grain of Calomel every night, which may be continued for a week, and then it should

be omitted for an equal period. This plan may be pursued for the alternate weeks of two or three months.

As a general rule of practice in this disease, we may remark, that the less severe the evening accession of fever appears, the more free may we be in the exhibition of tonics, and the less will be the necessity for the use of purgatives: on the other hand, the more severe the evening paroxysm, the greater will be the caution necessary in the exhibition of tonics, and the less restraint required in the use of purgatives.

Exercise in the open air should be especially recommended, and as the sea-air seems to be of essential benefit to such patients, a residence near the coast, where it is practicable, should be adopted.

Cold sea bathing, under certain circumstances of the complaint, is beneficial; but an indiscriminate use of it cannot be too forcibly forbidden: If, for example, the pains within the abdomen occur frequently in the day, if the Tongue is white, the Pulse

frequent, the thirst considerable, and the evening paroxysm of fever distinctly defined, cold bathing must on no account be adopted. If, on the contrary, there should appear so decided a diminution of fever, pain, and thirst, as to encourage you to improve the power of the tonic medicines, you may call to your further help the aid of cold sea-bathing: though I would in no case recommend that the patient be at first plunged into water of the temperature of the atmosphere.

The bath first used may be heated to 80°; at the second exhibition, to 70°; and at the third, to 65°: after this (if it should be Summer) the patient may use the sea water at its usual temperature; or, (if it should be Winter) he should continue to employ the water heated (as above stated) to 65°.

The Diet should be milk, gruel, dressed vegetables, and all kinds of farinaceous food: twice or three times in the week, (provided the patient exceeds the age of

three years) a small quantity of animal food may be allowed, but all fermented liquors should be prohibited.

If a child is born of scrophulous parents, I would strongly recommend that it be entirely nourished from the breast of a healthy nurse for at least a year: after this, the food should consist of milk and farinaceous vegetables: By a perseverance in this diet for three years, I have imagined, that the threatened scrophulous appearances have certainly been postponed, if not altogether prevented; and that too, in some instances, where we might presume that the predisposition to such disease was very strong, from the operation of hereditary influence.

THE END.

Printed by W. Bulmer and Co.
Cleveland-Row, St. James's.